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What then must we do?

India is a rich country; rich in heritage, history and traditions. India is rich in lasting monuments of antiquity that have withstood the storms of time, the ravages of unkind and cruel forces of events. India is rich in arts and crafts and culture that any country can boast of. India is rich in mineral resources, in man-power, in forest and natural wealth. The high-rise buildings in our metropolises, the numerous splendid hotels, the grand shopping centres, the sprawling mansions and bungalows, the modern air-terminals, all of them tell a tale of affluence and abundance. The fleet of sleek automobiles moving on the metalled roads of our major cities and the towering chimneys spouting smoke in our industrial areas are obvious indicators of our economic growth, financial stability and planned progress.

Yet, with all this convincing evidence of our being rich, we know too well that we rank among the poor countries of the world, if not among the poorest. We are face to face with a paradoxical situation—poverty in the land of plenty, deprivation in a democratic set-up. It is very easy to heap the blames on the government for all the ills and miseries and troubles for the simple reason that government is not an individual; it is a machinery. But, do we, as individuals of the society, have the courage to declare the shares that we hold in allowing the poverty to continue? In one of our states, where masses are generally poor, the social status of a person is estimated by the quantity of food thrown into the dustbin after the wedding is over. Some of us decide to purify a certain river by pouring hundreds of litres of milk while thousands of poor children go without it every day. The list of instances of such irrational and unproductive acts is long and lingering. And, let us be assured that no government has a role in these acts. Do such actions not expose the poverty of thinking on our part? We have to search our hearts to find out the cumulative effects of such emotional behaviour, and their direct impact on the problem of poverty.

Let us be frank about one fact. The problem of poverty is not a new one. It has been there for ages. The world has always remained divided between the haves and have-nots. We know that rich and poor are relative terms. There are poor in rich countries also. What we are concerned here with is the large scale economic poverty that our own people are suffering from. To wage a winning war against this poverty is physically possible. And that is what we are doing by launching various programmes, by using a number of strategies at our command, and by mobilising all the resources that we can muster. Yet,

we are told, the ameliorative measures, though implemented year after year, have not produced the desired results. Perhaps, we need not rake our brains to know the reason. Poverty of sincerity or the lack of commitment on the part of the few invariably leads to the loss of benefits earmarked for many.

The urge to have power, position, popularity and property is inherent in most of us. Perhaps, it is human nature. Very few can resist the temptation. It is common experience that those who have much, want more. Enough is not enough for them. It is only to curb this urge, to keep it within manageable limits that laws are made. The laws are there to have a constant vigil so that one does not grow at the cost of others. But then laws are man-made, and have loop-holes. They are liable to interpretation. It is within our knowledge that rules and regulations that are meant to help are often used to harass people, and complicate a simple situation. It is the law within us, the command of conscience, the power of judgment to decide between right and wrong that helps in implementing and following the man-made laws correctly, and for the good of the society at large.

The adamant existence of the parallel lines of opulence and destitution in such bold relief in our country, is not commensurate with the ideals that we have chosen to follow. We have to bring a drastic change in ourselves, in our attitudes, in our pattern of behaviour, if we want to bring a healthy change in the society. The achievement of the goal of the eradication of economic poverty largely depends on the result of our fight at the psychological and moral fronts. In this fight, every thinking individual has to get genuinely involved. Will it not be correct to say that an ounce of concern shown by the haves for the have-nots can produce a pound of result. Today what we require most is sincerity, not for a narrow cause, but for a broader purpose; commitment, to see that the projects for the poor are implemented in right earnest; vision, to make the best use of our vast resources for the benefit of all. Let us ponder over what one of our ancient thinkers has said :

अमत्रं अक्षरं नास्ति। नास्ति मूलं अनौषधं।
अयोग्य: पुरुषो नास्ति। योजक: तत्र दुर्लभ:।

(महासुभाषित संग्रह)

(It is not that letters are without spell
Nor the roots are devoid of their medicinal worth
Nor any one is incapable; their proper users are not usually available.)

—Chief Editor

Refusal to think : an act of cowardice

Shri Vasant Sathe

In this introspective article, the author, Shri Vasant Sathe, Union Minister and political thinker, has very boldly analysed the reasons of lingering poverty on a disturbing scale despite the semblance of a remarkable planned progress in the country. He minces no words when he tells point-blank that most of the politicians and civil servants, although highly intelligent, experienced and sincere, have got used to soft options and, therefore, to soft life. He does not believe in pessimism and suggests that the synthesization of Mahatma Gandhi's dream and Jawaharlal Nehru's vision holds the key to the total elimination of poverty from our land. The author has proved with exhaustive data that the diminishing purchasing power of the Rupee has rendered the concept of the accepted poverty line a mere illusion. It would be just deceiving ourselves, he says, in drawing a line of poverty and moving it upward and downward to find false solace and satisfaction that we have been able to substantially remove poverty. In conclusion, he poses a pertinent question : Can we not change our statusquoist administration and make it result-oriented and accountable ?

BEFORE WE CONSIDER A VERY IMPORTANT human problem, namely, one dealing with poverty in our country, we must essentially begin by having a correct perspective to be able both to understand as well as to find a solution to this problem. Poverty, by its very definition, is absence of necessities of life. Basically it is in the form of goods required for survival. Next, if we consider human being as a member of a civilised society, the absence of minimum education and cultural facilities will also be an essential ingredient of poverty. Similarly, to be able to live a healthy life and also to survive, it is imperative that each individual member of a society should have minimum medical facilities. The absence of this is the third important ingredient. It is common knowledge that most of the miseries

suffered by human beings are on account of paucity of these minimum needs.

It has been said by no less a person than Mahatma Gandhi that "there is enough in this world to meet every single individual's needs, but there can never be enough to meet even a single individual's greed". Thus, poverty is basically a man-made phenomenon, because with a proper productive and distributive justice in any society, one could easily ensure availability of at least the necessities of life to every individual member of the society. But in the process of generation of wealth, that is, goods and services because a few members of the society manage to

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"But in the process of generation of wealth, that is goods and services, because a few members of the society manage to usurp and accumulate the result of the labour of majority members of the society for their own consumption and enjoyment, *it leads* to disproportionate distribution, exploitation and extortion of majority of the members of the society by a few. It is this that is responsible for the evil of poverty".

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understanding human life

Man is the only known intelligent species on this planet earth, who can, by the use of his intellect, bring about alteration in the circumstances of his life. This intellect and the achievements thereby have evolved over a period of thousands of years and man has risen from semi-animal stage of a cave-man to the present stage of a spaceman. Throughout this process of evolution, he has always asked the question about what he is, what is his relationship with the universal cosmic intelligence which is the source of this vast universe. He has been asking these questions and as a matter of convenience and so as to find a reasonable explanation for many imponderable *and unexplainable things, he has called the* superior power 'god' or many other similar names and established his link with him, as a child would do to his parents. Again, through the intermediaries of seers, prophets and messiahs, he had a code of conduct laid down so that he may be able to live an orderly life along with other fellow human beings. His biggest anxiety has been to get maximum joy and happiness through the use of this body and the span of life, which knowing fully that its tenure was uncertain, nevertheless, he constantly attempted to prolong. This basic querry of the relationship of the human mind with the Mind Beyond is important for establishing his co-relationship not only with the supreme but also with his fellow beings as well as the entire nature. This has been beautifully summed up by the seers of Vedic India, who said :

ईशावास्यमिदं सर्वं यत्किञ्च जगत्यां जगत् ।
तेन त्यक्तेन भुञ्जीथा मा गृधः कस्यस्विद्धनम् ॥

meaning that everything in this universe, both at the macro level and micro level, is pervaded by that one universal cosmic energy. It is with this knowledge that one should enjoy well being in this world and should not covet wealth which does not belong to any one person. If this perspective of our seers were to be followed, there would be no problem of poverty. It is essential to have this spiritual observer attitude, to be able to understand human life on this planet Earth, including that of poverty which today is the most important.

We know that poverty is the result of distortion *of incomes, which is the result of extortion* by a few of the many. Hence, the primary duty of those who are responsible for securing and ensuring social and economic justice to all members of human societies in a given state, is to so structure economic institutions, both productive and distributive that the society will be free from exploitation of man by man, and justice, social and economic, will prevail. This responsibility is even greater in a society which claims to be democratic where the ruling representatives are elected by the people periodically and are answerable for their performance.

computerisation of poverty

As a matter of fact, poverty that is, absence of bare necessities of life which cause suffering, is there

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"The reality of the situation is that millions and millions of young men, many of whom have had the advantage of free general education, are finding themselves without any productive jobs, both in the rural areas as well as in the urban centres".

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for any honest man's naked eyes to see. You can see it all round, even in isolated urban islands of affluence *if one were just to peep into the slums and watch* human beings live in gutters, watch their children trying to sort out the filth of the garbage. If one were to go to the rural areas, this poverty is writ large particularly on the members of the families of those who have very small land holdings and those who are totally landless. After all, these essential commodities like cereals, edible oil and fuel are either acquired in the form of wage goods in kind or in the form of payment in terms of money and most of the earning in rural areas is either based on the produce from land or is connected with labour on land. It is common knowledge that Indian village,

which throughout the centuries was nearly self-reliant in terms of normal needs has, under the impact of modern industrialisation, got substantially changed and most of agro-industries have disappeared from the rural areas and got centralised in large-scale industries of the urban centres. The most prominent among the agro-industries were cloth-Making, leather goods, edible oils, pottery, etc. It is a bare fact that with growing population which has more than doubled since Independence, there are no new avenues of employment which have been generated in the rural areas and the people are being forced to migrate to urban metropolitan centres, even if that meant living in sub-human conditions of existence in slums and jhuggis. The reality of the situation is that millions and millions of young men, many of whom have had the advantage of the free general education, are finding themselves without any productive jobs, both in the rural areas as well as in the urban centres. If one has eyes to see, one can see the growing unrest in the hearts of these youth which, for want of any proper direction, erupts through immediate populist causes, be they communal, parochial, lingustic, casteist or with similar other overtones. These are essentially narrow fissiparous tendencies, but as stated above, in the absence of mobilising national cause, they provide an outlet to the frustrated youth.

It is really amazing and saddening that for these obvious realities one should want to find statistical data and analysis and find a solution from the computers and, as if the data and the statistics collected by various organisations, groups and task forces set up by the Planning Commission were not enough, it is now being proposed to set up an experts' study group under the aegis of the World Bank to study the condition of poverty in India! There could be no greater travesty of truth and humiliation than this. However, some of us are determined to deceive ourselves in drawing a line of poverty and moving it upwards and downwards to find false solace and satisfaction that we have been able to substantially remove poverty and raise a large number of people above poverty line. Let us therefore consider some of the known facts

the dictum of data

The first and foremost would be the per capita share of the wealth generated in the country. While considering this even *ex facie*, what is important is to consider the income at constant prices with some firm base, because that will show the real purchasing power and not at current prices, when the rupee gets reduced in value to below 14 paise. The first table of statistics will therefore be one related to GNP and per capita income, both in terms of current prices as well as in terms of constant prices with 1970-71 as the base year :

National Income and Per Capita Income

Year	*Gross National Product (GNP)*	*National Income*	*Per Capita* GNP	*Per Capita* National Income
	(Rs. crores)			*(Rs.)*
At current prices				
1950-51	9,136	8,812	255	246
1960-61	13,999	13,263	323	306
1970-71	36,452	34,235	674	633
1975-76	66,375	62,302	1,094	1,026
1980-81	1,13,846	1,05,743	1,677	1,557
1981-82	1,30,763	1,20,966	1,884	1,743
1982-83	1,45,280	1,33,807	2,049	1,887
1983-84	1,71,713	1,58,265	2,372	2,186
1984-85	1,89,417	1,74,018	2,563	2,355
1985-86	2,13,553	1,95,707	2,832	2,596
1986-87	2,35,440	2,15,770	3,060	2,800
At 1970-71 prices				
1950-51	17,469	16,731	487	466
1960-61	25,424	24,250	586	559
1970-71	36,452	34,235	674	633
1975-76	42,799	40,274	705	664
1980-81	50,711	47,414	747	698
1981-82	53,468	49,934	770	720
1982-83	54,872	51,154	774	722
1983-84	59,260	55,300	819	764
1984-85	61,427	57,243	831	775
1985-86	64,583	60,143	857	798
1986-87	67,810	63,150	880	820

Note: Figures from 1980--81 onwards are provisional

Similarly, the change in the rupee value also can be seen from the following table :

Purchasing Power of Rupee in relation to 1960 Prices

Year	*Purchasing Power of Re. (In Paise)*
1961	96.2
1965	73.0
1970	54.3
1975	31.2
1980	25.6
1981	22.7
1982	21.1
1983	18.8
1984	17.4
1985	16.4
1986	15.1
1987 (June)	14.0

Thus, what Rs. 100 were capable of buying in 1960 would require more than Rs. 715 in 1987. Here again, we often deceive ourselves because unlike many other developed societies, the difference between average incomes of more than 80 per cent of the people living in the rural areas and those living in industrial urban pockets is so great that to total

up the entire national income and divide it by the population to arrive at a per capita income is a misnomer. This will be clear from some interesting income statistics as highlighted in the All India Income Tax Statistics, the latest available figures being for 1984-85.

Number of Returns, Income Returned and Tax Payable by individuals

(Assessment Year: 1984-85)

Range of income returned (Rs. '000)		No. of Returns	Returned Income (Rs. '000)	Tax payable (Rs.' 000)
1.L.	20	1286010	2279,83,80	104,01,66
20	25	765072	1747,34,07	182,91,88
25	30	177384	493,88,98	73,78,35
30	50	246012	931,67,62	207,38,27
50	1,00	153930	1040,68,67	363,54,75
1,00	2,00	16865	224,87,39	110,13,65
2,00	3,00	2975	71,50,95	39,91,14
3,00	4,00	1065	36,36,25	20,91,66
4,00	5,00	485	21,24,74	12,93,64
5,00	10,00	471	32,58,73	19,87,80
10,00		127	24,77,46	15,50,60
Total		2650396	6904,78,66	1150,93,40

Total number of assessees is 34.63 lakhs, out of whom individual assessees are 26.50 lakhs. The total income returned for the year is Rs. 14,463 crores and total tax payable is Rs 4,000 crores. However, it is pertinent to note that of all these assessees, the high income returns under the category of 'individuals', i.e., above Rs. 1 lakh, constitute less than 21,978 or less than 1 per cent and they were responsible for 71 per cent of the total tax payable. This shows that firstly, those who come within the taxable limit out of a population of about 800 million are less than 27 lakhs and even among them those who constitute the high income group (above Rs. 1 lakh) are less than 22,000. Even in this small group, the number of assessees with a returned income of more than Rs. 10 lakhs is only 127.

It is common knowledge that the income which has escaped taxation is estimated to be anywhere round about Rs. 40,000 crores per annum, which is nearly three times the income returned. Even if we multiply in the same ratio the persons who would be having all this unaccounted money, it will be seen that about 100,000 individuals own and control most of the unaccounted and accounted wealth of this country. One can try to be liberal and say that all this unaccounted wealth of the parallel economy as well as the accounted wealth spent through governmental activities does percolate down and a large number of salaried employees, industrial workers and employees working in other activities such as transport, trade, etc., do have an income which on an average is above Rs. 1000 per month at current prices. But such a population, with all liberal stretching, could not exceed about ten million. It must be remembered that it is the circulation and injection of this unaccounted money which is acting as a poison of corruption affecting the entire power strata of our society. After all, we do not have correct figures about the income of the people except the broad per capita figure. However, we do have some idea of what people spend. This is collected by the National Sample Survey on Consumer Expenditure (1983):

Distribution of persons by monthly per capita consumption expenditure

(1983-84)

Expenditure Class (Rs. per capita per month)	*Percentage of persons*	
	Rural areas	*Urban areas*
0—30	0.92	0 21
30—40	2.47	0.51
40—50	5 11	1.40
50—60	7 90	2.93
60—70	9.69	4.92
70—85	15.24	9.52
85—100	13.64	10.64
100—125	16.99	17.17
125—150	10 00	13.13
150—200	9.78	16.31
200—250	3 96	8.75
250—300	1 81	5.19
300 & above	2.49	9.32

It will be seen from these figures that individuals who have a capacity to spend more than Rs. 150 per month are approximately 19 per cent in rural areas. In urban areas, they constitute 39.5 per cent cf the population. Now, it is for us, as men with commonsense and experience in life, to see how much of necessities a person can have in Rs. 150 per month, in other words Rs. 5 per day, if he were to go into a retail shop or even a fair price shop, and try to buy in terms of cereals, pulses, edible oils, potato, onion, fuel—leave alone clothing, shelter and other essentials. Thus, to draw a line at Rs. 101.80 per capita per month for rural areas and Rs. 117.15 in urban areas is, by any consideration, highly arbitrary. In this way, we can reduce the line further and satisfy ourselves that a larger number of persons in the population have risen above the poverty line.

"However, some of us are determined to deceive ourselves in drawing a line of poverty and moving it upwards and downwards to find false solace and satisfaction that we have been able to substantially remove poverty and raise a large number of people above poverty line".

Table below shows the various items which are included in the consumption basket of persons near the poverty line for the year 1983-84:

Consumption basket of persons near the poverty line (Share of items)—1983-84

	Items	*Rural*	*Urban*
1.	Total cereals	37.55	27.72
2.	Gram	0.24	0.19
3.	Cereal substitute	0.19	0.09
4.	Pulses	3.83	4.04
5.	Milk & milk products	7.02	8.66
6.	Edible oil	4.23	5.74
7.	Meat, egg and fish	3.08	3.71
8.	Vegetables	5.22	5.84
9.	Fruits and nuts	1.19	1.52
10.	Sugar	2.81	3.08
11.	Salt	0.18	0.14
12.	Spices	2.53	2.62
13.	Beverages & refreshment	3.13	5.30
14.	Food Total	71.21	68.66
15.	Pan, tabacco, intox.	3.12	2.80
16.	Fuel & lighting	7.67	8.43
17.	Clothing	5.55	3.19
18.	Footwear	0.73	0.70
19.	Misc. goods & services	10.98	15.70
20.	Durable goods	0.72	0.53
21.	Non-food Total	28.77	31.34
	Total	100.00	100.00

One would like to challenge any person preparing these statistics to go to the market with Rs. 5 in his pocket and buy these items, even as per the percentage mentioned in the Table. Statistics, unfortunately, are often used for self-deception!

It is said that the first condition for improvement is the need of a will to look at the facts in their face and willingness to face the truth. If we deliberately adopt an ostrich-like attitude of shirking away from the facts and burying our heads in the sand of self-delusion, then we can never come to grips with reality nor shall we be able to find a solution to these problems. The fact is that more than 85 per cent of our people in rural areas and more than 60 per cent of our people in urban areas can be said to be in abject conditions of poverty, if by that it is understood to mean absence of basic requirements of a dignified and hygienic human life. A very small section of our people, even among those less than 20 per cent above poverty line are rolling in affluence and have become a highly consumerist, elitist section of our society. They are responsible for ushering in an artificial five-star culture sustained by the vulgar unaccounted wealth and it is a stark reality that we have not been able to evolve a system which will curb this totally distorted picture and change the direction of our economy towards an equitable and egalitarian socio-economic life.

When we started planning, Pt. Jawaharlal Nehru wanted to start a planning process, which would enable the growth of infrastructure input, which in turn would enable growth of small scale and cottage industries in rural areas and thus bring about improvement of the living conditions of our people in the villages. Frankly, I do not see any contradiction between the objectives of Jawaharlal Nehru and those of Mahatma Gandhi, as have been recently spelt out *in the letters which have been reproduced in the* article by *Shri Sudhir Chandra* in the *Sunday Review of Times of India* dated November 8, 1987. Let us once again read the letter dated October *5, 1945* from Mahatma Gandhi:

> "....Appreciating modern knowledge and viewing the old from its perspective, I find the old very sweet in its *new* attire. You will not understand me if you think that I am talking about the villages of today. My villages today exist in my imagination. After all, every person lives in the world of his own imagination. The villager in this imagined village will not be apathetic—he will embody pure consciousness. He will not lead his life like an animal in squalid dark room. Men and women will live freely and be prepared to face the whole world. The village will not know cholera, plague or small-pox. No one will live indolently nor luxuriously. After all this I can think of many things which will have to be produced on a large scale. Maybe there will be railways, so also posts and telegraphs. What it will have and what it will not I do not know nor do I care. If can maintain the essence, the rest will mean free facility to come and settle. And if I have the essence, I forsake everything."

Panditji in his provisional reply of October 9 made the following pertinent observation:

> ".....Then again we have to put down certain objectives like a sufficiency of food, clothing, housing, education, sanitation, etc. which should be the minimum requirement for the country and for everyone. It is with these objectives in view that we must find out specifically how to attain them speedily. Again it seems to me inevitable that modern means of transport as well as many other modern developments must continue and be developed. There is no way out of it except to have them. If this is so, inevitably a measure of heavy industry exists. How far will that fit in with a purely village society? Personally I hope that heavy or light industries should all be decentralised as far as possible

and this is feasible now because of the development of electric power. If two types of economy exist in the country there should be either conflict between the two or one will overwhelm the other......".

Further, after meeting between the two on November 12, Gandhiji's letter sent the next day, makes very pertinent reading. He tried to reconcile the apparent discrepancies between the two views and summarised them in the following points :

1. In your view the real question is how to enhance the intellectual, economic, political and moral power of every human being. In mine too.

"The fact is that more than 85 per cent of our people in rural areas and more than 60 per cent of our people in urban areas can be said to be in abject conditions of poverty, if by that it is understood to mean absence of basic requirements of a dignified and hygienic human life."

2. And every person should therein have similar right and opportunity to rise higher.
3. The condition of the country and the city should accordingly be similar. They should, therefore, be similar in respect of food and water, habitation, clothing and recreation. To bring about this situation one should today produce one's own clothes and food and build one's own house. And even one's water and light should be similarly produced.
4. Man is not born to live in jungles, but to live in society. To ensure that one person does not ride another, the basic unit must be an imaginary village or group that can remain self-sufficient and within the group there needs to be mutual dependence. This way of thinking provides a picture of the relationship among human beings inhabiting the entire world.

If these points are seen in totality, one finds no inherent contradiction between the objectives of these two great leaders. In fact, it is in finding a synthesis between their views that the solution to the problem of poverty in India lies even today. It is my fond hope that this synthesis can be achieved by a young Gandhi who also happens to be the heir of Nehru.

The essence of the solution lies in augmenting the availability of infrastructure inputs by best utilisation of both natural and human resources in most effective, cost efficient and economic manner, so that we may be able to produce basic inputs like coal, steel, aluminium and other metals and minerals and also electrical energy as well as other natural and perennial source of energy. These infrastructure inputs produced economically and on a very large scale will have essentially to be in a capital intensive large-scale sector and along with them we can have an infrastructure of transportation and communication efficiently organised, again on cost-effective basis. It should be easily possible to so devise our industrial policy that the consumer goods industries, which by their very nature can be made labour-intensive, could be decentralised and established in rural areas so as to make a village or a group of villages more or less self-sufficient in the basic necessities of life, such as, food, housing, apparel, edible oils, vegetables, agro-industrial products like eggs, milk, meat, leather goods, utensils, furniture, etc. By thus reorganising the structure of our economy, we can give a new direction to establish a society free from exploitation and where minimum necessities of life of each individual could be fulfilled mostly in his own habitat.

Modern science and technology, such as Television, VCRs, computers, computerised telephone system, communication—all these could be used to bridge the distance between villages and the urban centres and in fact, carry most of the urban facilities which attract people from rural areas back to the rural areas and thus bring the benefits of modern science and technology to largest number of our people in the countryside. This will prevent the avoidable exodus from rural areas into urban centres which, as is well known, are creating artificial problems not only of human habitation, like the slums, but the artificial need of communication in the form of flyovers, underground transportation systems, etc. But, above all, the most dangerous trend is in the total degradation of social and personal life that such artificial living conditions of urbanised society create in terms of unhygienic living conditions, such as, venereal diseases, drug addiction and growing wave of violence and crimes. All these evils could be avoided with this synthesis between the dream of Mahatma Gandhi and the vision of Jawaharlal Nehru.

time for serious thinking

All that is essential today is to have the courage of conviction and the will to accept hard options. If we could only make our system—political, administrative and economic—just result-oriented and accountable, we could usher in a peaceful democratic revolution in India, which, if it succeeds, by a fusion of philosophy of Gandhi and Nehru, could be a model for the rest of the world.

There are highly intelligent, experienced and sincere people, both among politicians and civil servants, who are in a position to advise the leader. But the real difficulty is that most of these people have got used to soft options and therefore soft life. They

have essentially become pragmatists who do not want any change that would, in effect, hurt the vested interests.

However, it is time we did some introspection and asked ourselves whether in terms of larger perspective, we have made the best use of life in this human frame and, in its worldly perspective, whether we have lived upto the expectations of the people who reposed faith in us when they elected us as their representatives. The main task entrusted to us was to create conditions wherein the last and the poorest of our citizens will have a chance not only to live a healthy life, but an opportunity to achieve excellence in the field of his choice. How far have we succeeded in this task? To what extent have we even been able to wipe the tears from the eyes of the deprived man as enjoined by the Father of the Nation? Is this to be condemned as an unrealistic and impractical dream?

"All that is essential today is to have the courage of conviction and the will to accept hard options. If we could only make our system—political, administrative and economic—just result-oriented and accountable, we could usher in a peaceful democratic revolution in India, which, if it succeeds, by a fusion of philosophy of Gandhi and Nehru, could be a model for the rest of the world."

Anyone having open eyes can see that there is serious erosion of credibility of the people in authority in the minds of the common man, in particular, the youth. It is a sad commentary on our image that the most popular films and stories are those which caricature and depict men in authority including judges as being utterly corrupt and without any character. These are very serious trends that could lead the nation towards anarchy combined with other divisive, obscurantist and fissiparous forces.

We must remember that 800 million people have placed their destiny in the hands of about less than 800 persons in Parliament. Of these, about 80 who constitute the government are most important. But even among these 80, hardly 8 who constitute the Political Affairs Committee and the High Command are indeed responsible for formulating policies that can shape the destiny of our people and the nation. The question that needs to be asked by these representatives, both in Parliament and the Government, is as to how much of our time and energy is devoted to those questions of policy that could change the direction from an exploitary to a non-exploitary system, from a stagnant to a faster growing economy in which maximum productive employment opportunities will become available to our millions of young men in their own habitat? We must also ask as to how much of our time and energy is spent on routine matters or in fire-fighting operations. Can we not change our statusquoist administration and make it result-oriented and accountable?

It is time we woke up to these realities lest the situation slips out of our hands. The need of the hour is for those who count and on whom responsibility has been reposed to think. Refusal to think is the biggest act of cowardice.

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Poverty : its what, why and how

Dr. Malcolm S. Adiseshiah

The core of the cause of poverty, according to Dr. Adiseshiah, a noted economist of the country, is the absence of assets among a considerably large number of people. Quoting extensively from authentic official and unofficial surveys, he has tried to prove the point that a mighty change in the present system of land distribution has to be brought in order to reduce the level of destitution. He is of the view that inequality results in poverty and poverty accentuates inequality. The land reform programme, in his opinion, has enough loopholes for a whole herd of elephants to march through. He is also not very hopeful of the numerous ameliorative measures adopted recently as they are merely adding assets to those who have them already. He gives a call for a real national renaissance when the rich and powerful give up a part of their wealth and most of their power so that the poor get the real freedom to organise themselves and fight against their exploitation.

WHAT IS POVERTY? IT IS DEPRIVATION. Such deprivation has four essential features. First, it is deprivation of the basic necessities of life—food, clothing and housing, from which, according to me, all other accompanying deprivations flow educational and intellectual deprivation, cultural and moral deprivation, in what anthropologists have come to call the culture of poverty. Second, deprivation means being deprived of what one is entitled to. Everyone is entitled, has a right, to a decent standard of living, and deprivation negates this entitlement and right. Third, there are various degrees of deprivation which we in this country have covered by inventing such terms as the poorest of the poor, the very poor and the poor, which we now use in our poverty alleviation programmes of the National Rural Employment Programme (NREP) and the Integrated Rural Development Programme (IRDP). Fourth, deprivation involves its antinomy which is abundance. That is, many are deprived because some have abudance, many are denied their entitlement because some have more than their entitlement.

One tragic advantage of this definition of poverty as the deprivation of one's entitlement to food, clothing and housing, is that we can measure fairly precisely how many are the deprived. To do that, we

have to go to the bottom of human existence and establish what is the minimum food, clothing and housing that is needed to keep a person (and his family) alive and active. There are differences of opinion among the technicians of food and nutrition, of clothing and housing of what this minimum is, but by and large a broad consensus has emerged that a man and has family (of 4-5 persons) must have Rs. 6400 a year (at current prices) to command this minimum: below that are the poor; those with annual incomes of less than Rs. 4800 are the very poor: and those with annual incomes upto Rs 3500 are the poorest of the poor.

"A great deal of time and effort is being expended, not in fighting poverty, but in developing sophisticated tools for calculating how many are the poor, and quarrelling over the varying statistical results."

On this basis, of the 741 million people (140 to 155 million families) living in the country as on 1 November 1986, how many are the deprived—inclusive of the various degrees of deprivation and poverty? On this, there is not only no agreement between the government and broadly the scholarly community—the government holding that the number of the poor is below 300 million (60—65 million families) and the scholars computing that the number is nearer 400 millions (80—85 million families) - a great deal of time and effort is being expended, not in fighting poverty, but in developing sophisticated tools for calculating how many are the poor, and quarrelling over the why of poverty.

Let us take the number of the poor in our country as at between 300 million, which is the official figure and 400 million which is what I and most of the academic community calculate it to be. It is now important to turn to the question of why we have 40 to 50 per cent of our families living in poverty.

the why of poverty

The basic cause is that a small number in the country own the assets—land, houses, stocks and shares and deposits in the banks (both in 'black and white') while the majority of people are assetless. Incomes which enable one to buy what is needed and liked in food, clothing, housing (and cultural goods), are earned through working in wage employment and self employment, or as return—rent, interest, profit—on the poverty one owns. Looking at our national income figures, we find the amount earned through work by 370 million of the 400 million of our work-force is just about equal to the income from property earned by the 30 million odd plus some of the self-employed.

This inequality in asset distribution and in incomes as between the rich minority and the poor majority has been officially documented for us in various ways by many agencies. The Reserve Bank of India in its three surveys of property holdings of rural families over three decades in 1961, 1971 and 1981 shows that while the bottom 30 per cent of rural families have been owning over this period 4-5 per cent or less of all rural property, the top 30 par cent owns nearly 80 per cent of all property, with the former's share lessening and the latters' increasing over the 30 year. Or again, the decenial census shows that assetless (landless) agricultural labourers increased from 17.2 per cent of the workforce in 1961 to 26.9 per cent in 1971 and to 29 per cent in 1981. NSS in its 37th round in 1982 shows that 55 per cent of farmers owned less than 1 hectare each, while 5 per cent owned more than 20 hectares each. Finally, we are proud of the fact that we are saving about 22-23 per cent of our Gross National Product—at around Rs 65,000 crores a year, but ignore the inconvenient factor of who does the savings. Studies show a very serious inequality in the origins of the savings. The top 5 per cent of our society save 50 per cent of all savings and the top 10 per cent save 70 per cent, with no savings from the majority 70 per cent of our society. Poverty thus stems from the fact that, because our property ownership is concentrated in a few hands, the majority have no property incomes, which as noted earlier, constitutes about an equal part with incomes from employment in our National Income. This also means that if through our various beneficiary oriented programmes like IRDP, NREP, RLEGP, SEPUP, supported by a higher growth rate, we are able to reduce or remove poverty, as seems to be the aim of the government, which hopes to reduce the proportion of the poor to 5 per cent of the population by 2000 AD, we will still have the growing inequalities in property and asset ownership in our society. This is seen in the record of our land reform programme. We stated (in the Sixth Plan) that ownership rights of tenants will be recognised by 1980-81. This has not happened in 6 major States extending from Punjab in the north to Tamil Nadu in the south. We said that intermediary tenures will be abolished by 1960, but they still exist in law in 3 States, and in fact in 13 others. We said that the takeover and distribution of surplus land will be completed by 1982-83. This has not happened in any State, but there is a lot of cheating on the amount

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of surplus land available for distribution to the poor, the official surplus land being established at 76 lakhs, while the Agricultural Census states that the real surplus is over 216 lakh acres. Also there are no ceiling laws in 3 States.

The majority having no incomes from property, have to earn an income from work in order to support themselves and their family. This is where the tragic fact of unemployment, malemployment and underemployment comes in as the second major reason for our poverty. The real tragedy is that we do not know how many people are unemployed and even more are underemployed, and they extended their contribution to poverty. We know the extent of unemployment in the organised—factory and government sector, but the organised sector employment constitutes less than 10 per cent of our work force (3.2 crores out of 40 crores). We know nothing of how many are unemployed and more seriously underemployed in the rural areas, where 80 per cent of our workforce lives. We do know from the NSS and other surveys that under-employment is very serious, affecting the majority of our rural workers, which means that they do not earn enough to maintain themselves and their families.

There are other consequential factors which contribute to our poverty. One of the important causal factors is what is called 'Black Wealth' and 'Black Incomes'. The official view is that black wealth and incomes' are equal to 30 per cent of our National Income. My studies show that they are over 40 per

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"The real tragedy is that we do not know how many people are unemployed and even more are underemployed, and the extent of their contribution to poverty."

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cent, a view with which the IMF staff study agrees. This Rs. 100,000 to Rs. 120,000 crores (in current prices) which includes some Rs. 5000 crores held illegally as balances in Switzerland and other tax havens,— all belong to the rich minority. The majority have no 'black wealth or income'. Second, as the majority of our people do not have the purchasing power to enter the market, the market is filled with luxury and upper middle class goods, for which there is demand. This further narrows the market, and the production system served by the market reduces employment. Thus we have the somewhat obscene fact that while passenger cars, five star hotels, washing machines, refrigerators, fine and finer fabrics and high cost drugs and formulations are produced in abundance and are bought up by the few well-to-do in society, there is inadequacy of wage goods—that is to say, food and food articles, housing, clothing, basic health drugs available to the people at "affordable prices".

the how ? the remedial measures

Is there a way out of this morass—a morass where inequality results is poverty and poverty accentuates inequality ?

Yes, there is a way out, but it is hard and almost impossible one.

The hard nature of the solution lies in the fact that we, who are the beneficiaries of this unequal and unjust system, should accept the fact that our system

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"Our system is not a national system : it is a system which serves the wealthy minority, and the power groups comprising and spawned by them. We are not in an economy which is growing in an accelerated way, we are accelerating the growth of those sectors which serve those who have the purchasing power. And high tech and modernisation are instruments of this lopsided growth which will further accentuate inequalities."

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is unequal and unjust, and not try to cover it up by calling the system a *national* system, and hoodwink both ourselves and the poor majority by speaking of our being on a path of accelerated economic growth, which *high technology and modernisation* brings, as a result of which poverty will decline and disappear. (Even in this verbiage there is no reference to the root cause of poverty, inequalities, in our society). Our system is not a national system : it is a system which serves the wealthy minority, and the power groups comprising and spawned by them. We are not in an economy which is growing in an accelerated way; we are accelerating the growth of those sectors which serve those who have the purchasing power. And high tech and modernisation are instruments of this lopsided growth which will further accentuate inequalities. Will we recognise these hard facts, because without such recognition, we cannot rid our society of poverty ?

If we do, then the first surgical action to combat poverty and see that it does not grow and multiply itself, as an amoebia does, in the future, as it is doing today, is to develop a social system that will make available assets to all families, so that there is no assetlessness in society. The original intention of the Land Reform Programme, of the Integrated Rural Development Programme, of the Differential Interest Rate scheme, of the Cooperative and Workers Management of enterprises project, was precisely this. Such a wide distribution of assets is possible, if we can stop manipulating the Land Reform Programme

(contd. on P. 27

Diagnosis of destitution

Prof. Bhabatosh Datta

"In fact 'Poverty' to us is really an area of darkenss,\", opines Prof. Bhabatosh Datta, an economist of repute. In this article he has carried out a pathological test on the malady of the mal-distribution of income in our land from which millions are suffering for long. In spite of the accepted argument that budget allocations for new programmes designed to demolish poverty have been quite impressive, poverty continues to persist as a major problem. The author, on the basis of authentic data, has dealt at length with the concept of the "poverty line", which, according to him, is not only arbitrary in nature, but also gets converted into a policy-criterion. His contention is that while we are making efforts to prepare estimates of the number of persons or families being pulled across the poverty line, we do not have any reliable figure of those who, possibly might have moved downward from above the line, in the same relevant period. Pointing towards the holes in our information fabric he has raised questions regarding the infant mortality rate, expectation of life at birth and illiteracy for different income-brackets.

THE PREAMBLE TO THE CONSTITUTION OF INDIA, which came into force on January 26, 1950, put "justice, social, economic and political" as the first among the objectives of constituting India into a sovereign, democratic republic. The Directive Principles promised everyone "the right to an adequate means of livelihood", "living wage", "a decent standard of life", and all that, and also declared that the operation of the economic system must not "result in the concentration of wealth and means of production to the common detriment". These clauses did not give the people enforceable rights and made some cynics observe that concentration of wealth would be permissible if such concentration was thought necessary by the policy makers for the common good. But yet, high hopes were generated. It is tempting to see how far these hopes have been realised in the four decades following Independence.

Like the Constitution, the Plan documents also generated optimistic expectations. The first Five Year Plan (1951—55) started with the clear assertion that the central objective of planning in India was "to raise the standard of living of the people". Nearly thirty years later, the then Prime Minister's Foreward to the Sixth Plan quoted Tagore. "The day will dawn.

"Hold thy faith firm", with the implication that the darkness still remained to be dispelled. Another five years later, the Deputy Chairman of the Planning Commission gave "removal of poverty" the first place in stating the basic objectives of planning in India. In the meantime, "garibi hatao" had been taken up as the keynote for all planning activities. New poverty alleviation programmes were designed and the budget allocations on these have not been quite unimpressive.

But, despite all this, poverty persists as a major problem. When in 1971 Professors Dandekar and Rath introduced in the Indian discussion the Rowntree-Beveridge concept of the "poverty line", they estimated that 40 per cent of the Indian population in 1967-68 was below the line, as defined by them. The definition of the line has been changed from time to time, mainly for inflation-indexing, and it is now placed at a family income of Rs. 6400 per year. In 1967-68, the Indian population was about 500 million and the number below the Dandekar-Rath line was thus about 200 million. According to a reported statement of an official spokesman, the number below the re-defined line is 270 million. Ignoring all the complexities of definition and comparison, one can say that while the percentage of population below the poverty line has declined—from 40 to about 35, the glaring fact stands out that the total number has increased by 70 million in about 20 years.

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It is not necessary to be bogged down here into the interminable controversy on the components of "non-poverty", or on the placing of the cut-off line. It is enough to note that unless all incomes are absolutely equal, any economy, however rich, can conceive of a poverty line. The Beveridge concept of the early twentieth century was based upon what was considered to be the minimum necessary for maintaining productive efficiency, but that raises further questions of other definitions. There has to be some arbitrary judgement in defining the poverty line and one does not improve the logic by transferring the assumptions from the final stage to the stages below. All that one needs to accept now is that an income of Rs. 6400 per annum for a family (of 4 or 5), i.e. of about Rs. 533 per month, is a quite low income, and is about half of the over-all net national product per family.

The crucial problems lie elsewhere. First, the acceptance of a poverty line as a conceptual criterion converts itself into a policy-criterion. Policy-makers are happy if there has been an increase in the numbers above the line and a decline below the line, without considering where the "transferees" were placed before the change. A ten-rupee increase in the family income from Rs. 6380 to Rs. 6390, does not affect the dichotomic percentages, but an equal increase from Rs. 6395 to Rs. 6405 produces better statistics, which can be used as good publicity material. Secondly, while estimates are made of the number of persons or families that have been pulled up across the poverty line, there are no estimates of the possible downward movement from above the line to below it in the same relevant period.

gauging the gaps

In fact "poverty" to us is really an area of darkness. We do not know what we require to know, particularly in regard to what is happening to the distribution of income among the different strata below the poverty line—from sheer destitution to the position just below the line. It is not impossible that while some families are crossing the poverty barrier, some other families are going down from the "very very poor" stage to the destitution stage". Assuming that we have a defeasible definition of the poverty-line, a mere head-count (generally very imperfect) is not enough. The picture of deprivation can be better understood by estimating the gaps between actual incomes and the standard poverty line income.

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If, for example, a family has an income of Rs. 2400 per year (i.e. Rs. 200 per month), its income is Rs. 4000 below the poverty line. This gap, expressed as a ratio of the poverty line income of Rs. 6400, gives a deviation or deprivation ratio of 62.50 per cent. And this, it should be emphasised, does not indicate the deprivation below the national average income. The official reports now sub-divide the "poor" (i.e. those below the poverty line) into four sub-groups: the "destitutes" (the poorest of the poor) with annual family incomes between Re. 1 and Rs. 2265; the "very very poor", with family incomes between Rs. 2266 and Rs. 3500; the "very poor" with family income between Rs. 3501 and Rs. [illegible] ... richest

among the poor, with incomes between Rs. 4801 and Rs. 6400. Information is available about the distribution of the benefits of the poverty alleviation programmes (IRDP in particular) among the four groups, but no meaningful conclusion can be drawn, as there are no details about the total numbers in the different groups.

Taking the poorest of the poor, with annual family incomes between Re. 1 and Rs. 2265 and with a mean income of Rs. 1132 (assuming linear distribution within the sub-group), one notes that this mean income in only 17.69 per cent of the poverty-line income of Rs. 6400, indicating a deprivation ratio of 82 per cent. Proceeding in the same manner, one gets deprivation ratios of 55 per cent, 35 per cent and 14 per cent for the three groups. If one could assume that each of these groups contains the same number of families, the average deprivation below the poverty line of the whole below the line population works out at 46.50 per cent. But the assumption is unrealistic, when *there is no information about the shape of* the distribution curve. It could well be that the weighted average deprivation is appreciably above 46.50 per cent.

The evaluation of the IRDP undertaken by the Department of Rural Development of the Government of India for the twelve-month period October 1985 to September, 1986, is inadequate in many respects and is revealing in others. The number of beneficiaries during the entire Sixth Plan period (1980-85) was 16.42 million—the annual figure rising from 2.73 million in 1980-81 to 3.84 million in 1984-85. It is not however clear whether all the annual figures relate to new beneficiaries during the year, or the same individuals have been covered more than once. It is also not clear whether the increase in income of a beneficiary was a single-year or short-period increase, or an increased long-period annual stream. The fact that the per capita investment was on average Rs. 2795 per year does not indicate any substantial increase in incomes. And, in any case, the total of 16 million beneficiaries was a very small fraction of about 270 million persons below the poverty line.

"The official reports now sub-divide the "poor" (i.e. those below the poverty-line) into four sub-groups: the "destitutes" (the poorest of the poor) with annual family incomes between Re. 1 and Rs. 2265; the "very very poor", with family incomes between Rs. 2266 and Rs. 3500: the "very poor" with family incomes between Rs 3501 and Rs. 4800; and the richest among the poor, with incomes between Rs. 4801 and Rs. 6400."

facts behind the Figures

The reports state that in the selected blocks, the majority of the beneficiaries belonged to the poorest of the poor "destitute" group. That was what it should have been, but it is distressing to learn that the statistics provided by the implementing authorities are not fully confirmed by the separate "assessment" conducted by the Department of Rural Development in regard to 16,101 sample beneficiary households. The selected samples were not proportionately distributed among the states—neither according to population, nor according to the extent of poverty. West Bengal with 8 per cent of the Indian population had only 592 households covered, i.e. 3.68 per cent of the total coverage of 16,101. The high figure of 1795 for Madhya Pradesh was probably justified by the high incidence of poverty, but the figure of 792 for the Union Territories, with only 1.43 per cent of the total population is surprisingly high.

It is encouraging to learn that about 78 per cent of the beneficiaries found the subsidy and credit assistance sufficient for acquiring the desired assets and that in 71 per cent of the cases, the assets were found, after investigation, to be intact. The ratio between subsidy and credit was generally 1 to 2; for example, in 1984-85 out of the per capita investment of Rs. 2785, the subsidy component was Rs. 920 and the credit component Rs. 1875. In 29 per cent of the cases, the assets were not intact, the main reasons being death, or illness of the beneficiary, inadequate income generation and high maintenance costs. Input and marketing facilities were available in 85 per cent of the cases, but this is based on "the perception of the beneficiaries" and has therefore to be cautiously interpreted.

Questions arise when one looks at the Report on the additional income generated. On the national basis, incremental income was more than Rs. 2000 in 26 per cent of the cases, between Rs. 1001 and Rs. 2000 in 24 per cent of the cases, between Rs. 501 and Rs. 1000 in 15 per cent of the cases and below Rs. 500 in 11 per cent of the cases. These percentages add up to 76. The report then states that in the remaining 24 per cent of the cases the assets did not generate any incremental income. The infructiuousness of the assets was low in West Bengal. Tripura and Gujarat (between 1 and 7 per cent of the cases) and very high in most of the other states. It is understandable that in 50 per cent of the cases, no incremental incomes was generated in Sikkim, but it is surprising to see 30 to 44 per cent of completely infructuous cases in Kerala, Punjab, Rajasthan, Haryana, and the Union Territories. It is also distresing to find Tamil Nadu, Maharashtra and Karnataka in the list of States with an infructuousness percentage of between 20 and 30 per cent.

The percentage increase in income as a result of assistance was 25 per cent or less in about 24 per cent of the cases and was more than 100 per cent in 15 per cent of the cases. Post-assistance income rose above the pre-assistance income by between 25 and

50 per cent in 23 per cent of the cases and by between 50 and 100 per cent in the same percentage of cases. There was no increase in total income in 16 per cent of the cases. Here again there were substantial inter-state variations, the worst cases being found in Orissa, Rajasthan, Bihar, Union Territories. West Bengal and Madhya Pradesh. There is some disagreement between the data for infructuous investment and those for the percentage increases in the post-asistance incomes, presumably because income from asset and total income were not identical.

dealing with distribution

The Report honestly indicates the "areas of concern". In 9 per cent of the cases, "ineligible families" were assisted. For this purpose, the cut-off line was placed at Rs. 4800—with the instruction that families with incomes upto Rs. 3500 were to be assisted first and "thereafter" those with incomes between Rs. 3501 and Rs. 4800. The "assessment" showed that the percentage of assisted ineligible families with incomes between Rs. 4801 and Rs. 6400 was between 10 and 13 per cent in Rajasthan, Kerala, Meghalaya, Haryana and Punjab. In quite a large number of cases (ranging upto 17 per cent), the families assisted included a good number with incomes above Rs. 6400. It is not stated whether this beneficial "over-kill" was due to inadequate, administration instruction and supervision, or to local pressures.

The second matter of concern is the discrepancy between the "recorded" and the "assessed" values of the assets. Such discrepancy was found in 33 per cent of the cases—amounting in some instances to more than Rs. 1000. The percentage of the difference to the recorded value is not given, but one notes that the investment per capita was around Rs. 3000. Here again there were large inter-state differences. The Report states simply that "these differences indicate "malpractices and leakages and require investigation by concerned authorities". As this is stated only in the summary and not in the more detailed main text along side the tables, it is likely to be by-passed by the "concerned authorities". Bank-finance for working capital was not available for 32 per cent of the beneficiaries requiring such funds. Here also the report states blandly that "this is an aspect the banks have to look into". The fact that there were large inter-state variations emphasises the need for effective action by the state governments in regard to the degree of initiative from the public-sector commercial banks, from the regional rural banks (in which the state governments have some voice) and from the cooperative societies.

Among the other areas of concern were the slack in the insurance of the assets created, deficiency in training facilities, large-scale failure of the government agencies in providing after-care and support and maintenance and repair facilities. High maintenance cost was indicated as one of the causes of the assets not being "intact", but there is also the more disturbing factor of repair and maintenance services not being available at all.

The Annual Report of the Department of Rural Development for 1986-87 gives in some cases data upto January 1987, but the picture that appears does not show any remarkable break with the past trends. It is stated that a fairly comprehensive scheme of "monitoring and concurrent evaluation" of the programmes has been developed. But what one likes to know is the performance of the poverty-alleviation programmes vis-a-vis the whole problem. The Reports referred to here do not give any information about poverty and alleviation programmes in the urban areas.

"The number of beneficiaries during the entire Sixth Plan period (1980-85) was 16.42 million the annual figure rising from 2.73 million in 1980-81 to 3.84 million in 1984-85. It is not however clear whether all the annual figures relate to new beneficiaries during the year, or the same individuals have been covered more than once."

The most serious gap in our information is that we do not know what are the total numbers of families or persons in each of the sub-groups below the poverty-line. This gap is a part of the more patent gap in our information about the total picture of income and wealth distribution in the country—decilewise or even quintile-wise. Even today, the World Bank in its World Development Report has to fall back on the imperfect estimates made for 1975-76, when the bottom 20 per cent of the Indian households had 7.0 per cent of the total household income, the second quintile had 9.2 per cent, the third quintile 13.9 per cent, the fourth quintile 20.5 per cent and the topmost quintile 49.5 per cent. The share of the topmost decile was 33.6 percent.

Of course there are many countries with such back-dated estimates, but Sri Lanka could provide figures for 1980-81. There is also the fact that while we have aggregated data about the infant mortality rate, expectation of life at birth and illiteracy, we do not know these rates for different income-brackets. If the infant mortality rate in India was 89 per 1000 in 1985, one is tempted to ask what were the rates in the lowest income-groups ? How much has the Indian life expectancy (which was 57 years at birth in 1985) increased at the bottom rungs ? These are questions to which answers are needed in order to understand the pathology of Indian poverty in concrete terms. But when we do not even have an up-to-date aggregative picture, it is perhaps too much to ask for a computerised tomograph of the disease, layer by layer. And as long as we do not have the information, there cannot be any real diagnosis or the pathology of poverty in the country. □□□

Growth and Justice—an understanding of the nature of our poverty

Hiten Bhaya

The author, member of the Planning Commission, an economist and a thinker, has very sharply dissected the physique of poverty, limb by limp, with the expertise of an experienced surgeon, in the article that follows. Having been closely associated with our planned development efforts, he is well equipped with the knowledge of their merits and shortcomings. The validity of the concept of "poverty-line" has been questioned by more than one economists. But, Shri Hiten Bhaya logically defends this concept when he says that it is just an indicator of the reflection of the magnitude of the problem, a rough ready reckoner. Surely, one has to have a point to start with. Tracing the roots of poverty to our age-old socio-economic structure which is based on the division of power and labour, he tells in plain words that the attitudes of the non-poor towards the poor, at the cognitive level, display concern, but, in the effective domain, they reflect a feeling of guilt and embarrassment. He firmly states that abject poverty can be removed by planned exploitation and management of our natural resources and proper development of human resources. He also tells that global peace is essential, as poverty elimination programmes and nuclear missiles can not be on the same flight path.

POVERTY IS OUR LEGACY of two centuries of colonial underdevelopment. Its continuance is an anathema and a blot on the escutcheon of free India. It is a challenge not only to the governments at the Centre and in the States, but to every Indian citizen. India is poor by most criteria of measurement—national income in relation to the population or the so-called quality of life indicators, or personal income related to calorie intake, or per capita consumption of energy or steel. We are materially poor in both absolute and relative terms. In the first place, there is not enough to go round by way of the basic necessities for our burgeoning population, except perhaps foodgrains in recent times, and in the second, much of what is available, is beyond the reach of millions, specially in the countryside.

The first tells the story of our vastly underutilized natural resources and the low productivity of our

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factors of production. It is also part of the global story of the inequality of development in the post-industrial revolution era. Planned development efforts during the last few decades have been directed towards rapidly remedying this situation. The second reveals structure of iniquitous distribution of assets, income and therefore of goods, services and opportunities in our domestic economy.

The development experience in the first few plans made it clear that the kind of massive growth needed for its benefits to trickle down sufficiently to the vast numbers of the poor has been out of our reach. Therefore, from the Sixth Plan onwards, a direct attempt at poverty alleviation was launched. These programmes continue in one form or the other in the current Plan also. The efficacy of these programmes have been critically reviewed and recently concurrent evaluations are in progress. There appears to be a general consensus that despite the lacunae the programmes have been, by and large, helpful to a substantial section of the target population. What is really debated is the degree of stability of the improvements these programmes are able to sustain.

"Poverty is a phenomenon induced by inequality. Is inequality a necessary outcome of development ? Are growth and redistributive justice incompatible ends ? Perhaps these are separate processes both dependent on the prevalent socio-economic power structure and the political system."

malignancy in body politic

The question that bothers everyone is whether such planned efforts are sufficient to see the end of our kind of pervasive poverty. To answer this question, it may be necessary to go somewhat beyond the anatomy of poverty to the aetiology of poverty as a malignancy in the body politic and its physiology, in the sense of the reactions of the different limbs and organs of the system to this malady.

Poverty is a phenomenon induced by inequality. Is inequality a necessary outcome of development ? Are growth and redistributive justice incompatible ends ? Perhaps these are separate processes both dependent on the prevalent socio-economic power structure and the political system. In a general way, it appears that whilst growth can be faster in a competitive, acquisitive and market-oriented system, its concommitant is increased inequality. On the other hand, total State control, whilst achieving a more egalitarian distribution, robs the economy of individual incentive and productivity. Private greed is seen as a more potent incentive than public weal. Does one have to choose the one or the other or is a blend possible ? There is a variety of examples and experiences but no clear answer to this dilemma.

However, historically, modern development has indeed taken place at the cost of one nation in favour of another, at the cost of sections of the population in favour of others. The nation States of Europe and the West were inspired by the goals of Liberty, Equality and Fraternity in their own countries ; but many of them soon worked on a paradigm which spelt bondage, inequality, and poverty for the less enterprising communities in the rest of the world. And we have today a world neatly divided between developed, developing and least developed countries. The Republic of India finds itself in the last category at the end of two centuries of colonial status. This is because development needs access to principal elements like raw material technology, capital and market and accessibility to these factors is determined by the power acquired to command them, be it through State power or power over the market. The distribution of fruits of development likewise depends on where and how such power resides. This is true internationally as well as within a domestic economy. It is by no means an easy struggle because such power once acquired will entrench itself and resist any change in the balance of advantage. This basic reality has to be borne in mind when one considers seriously a nation-wide redistribution of the fruits of development.

indicator of magnitude

For any planned attack on poverty elimination, a necessary step is to map the spread and intensity of such poverty, the starting point being a measurement of how poor is poor. The concept of 'poverty line' has been developed as a useful indicator for reflecting the order of magnitude, its spatial distribution and the trends. It serves as a rough and ready reckoner for allocation of resources. Economists may well argue about the validity of such a concept, its methodology and computation. Others may use it as a scoring point. But the fact remains that the number below any reasonable line runs into millions and represents the core of our socio-economic problem and perhaps political as well.

"The nation States of Europe and the West were inspired by the goals of Liberty, Equality and Fraternity in their own countries; but many of them soon worked on a paradigm which spelt bondage, inequality, and poverty for the less enterprising communities in the rest of the world."

(A quote : "we are not concerned with the very poor. They are unthinkable and only to be approached by the statistician or the poet". ("Howards End"— E. M. Forster).

Within the poverty line, there are varying degrees and depths of degradation. The IRDP authorities themselves have made further sub-divisions below

the poverty line, e.g. the destitute (Rs. 1-2265), the very very poor (Rs. 2266-3500), the very poor (Rs. 3501—4800), and the poor (Rs. 4801—6400) in terms of their estimated annual incomes. Even if the poverty line is considered as an absolute for keeping body and soul together there are relative poverties well beyond this line. For example, there will be many too poor to afford a balanced diet as distinct from total calories, many too poor to build a shelter or rent a living space, too poor to buy medicines or call in a doctor, too poor to borrow from banks, too poor to afford school or college education, too poor to seek justice in the courts of law. Poverty has thus many dimensions across and beyond the poverty line.

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Is redistribution of national wealth possible?

A legitimate question is asked as to whether the contour of India's poverty would be less jagged if her national income were more equitably distributed, say as in Cuba and China, irrespective of our own stage and level of growth. But in these countries radical redistribution followed in the wake of a revolutionary change in the social and political power structure. Such as option was ruled out when the Indian people chose the path of parliamentary democracy and a mixed economy. The residual question remains as to whether it is still possible to redistribute the national wealth more effectively within the political system we have chosen for ourselves.

Let us take only one example—the redistribution of rural assets. The bottom 30 per cent hold only 4 to 5 per cent of the total rural assets. Only 7.8 million acres of land have been declared surplus, 6 million taken over and 4.7 million redistributed. But the utilisation of the redistributed assets depends on the quality of the land (some are not easily arable) the inputs and credit available. Redistribution by itself does not resolve the problem. If all available arable land were distributed equally among all rural households, none singly might be self-sufficient. Even though productivity has increased, the average size of holdings has in fact declined leading to the marginalisation of the small farmer and immiserisation of the agricultural labour, specially in the permanent settlement area of the Eastern region as opposed to the areas where consolidation preceded the green revolution. Minimum wages do not yet cover all regions and occupations but whatever there is, is not enforcible in practice as the agricultural labour remain unorganised as a class. Sharing of water and electricity, likewise are not only areas of conflict in the State levels but even at the level of individual farmers. To tackle these issues is to strike at the very root of our socio-economic structure. It would be unrealistic to assume, that Governments who have to seek re-election ever so often, will take such a risk.

The lasting way of income distribution is through creation of employment opportunities. Direct planning of employment—wage or self-employment—however appears impracticable, when the entire agriculture sector and most of the industrial sector are private. At best a correlation between investment, growth and employment in different sectors, based on past experience be used as indicators, but they may not fructify in the same manner. There is no scope in our economy to direct the labour force to particular sectors or locations. Even programmes like the RLEGP have to operate within such limitations. It is not surprising, therefore, that there is overcrowding of employment in the Government sector. But it is debated as to whether such employment is really additive to net material growth. Economic censuses present the real picture of employment at the grass-roots level. Decentralized planning at the block and village level alone can identify practical possibilities. There is dearth of primary-data-based research in this regard.

we must face realities

The process of immiserization, the nexus between the power of command over resources and distribution of the fruits of development, the attitude of the affluent towards poverty are easy to see internationally. But it is more difficult to perceive and embarrassing to acknowledge that they are basically the same domestically. Nevertheless, realities must be faced. Our socio-economic structure is deeply rooted in the original caste structure, based on a division of power and labour. The power of knowledge and learning was the exclusive preserve of the highest echelon of the society, the power of arms and administration vested in the next, money power through trade to the third in the hierarchy, the rest being the hewers of wood and drawers of water—a poor but perhaps contented and integrated base on which the super-structure rested. This structure was so well buttressed with religious and social sanctions, and an overall quasi-philosophical doctrine of karma, rebirth, destiny and determinism, that it withstood centuries of change

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and upheavals. Layers of ignorance, superstition and obscurantist rites and practices were added, through the years to insulate the system against external forces of change, unlike similar feudal systems elsewhere. Even the later proselytisations by Islam or Christianity did not make an appreciable dent into this ancient Indian socio-economic structure. Somerset Maugham may have been wonderstruck to have come across the term Brahmin-Christians in Goa, but very few Indians would be so surprised.

It is significant that the core of our poverty is co-terminous with this base, classify them as you like, scheduled or backward communities, the economically weaker sections of the society, the poor, the very poor, the very very poor or the destitute.

The attitudes of the non-poor towards the problem of surrounding poverty are important factors in policy-making. At the cognitive level there is no doubt concern for and even an understanding of the nature of our poverty, but in the effective domain it remains merely one of guilt and embarrassment. The poor have been always seen as a threat to the stability of an established system. Aristotle said centuries ago "when there is no middle class and the poor greatly exceed in number, troubles arise and the state comes to an end". There is a large enough middle class today and their instinctive option is for incremental rather than radical reforms lest redistribution threatens current privileges and entails even a small sharing of the poverty and hardships that affect the majority. This has been possible because the non-poor, though a small minority, are, sufficiently large in absolute number to constitute a more or less self-contained community conglomerated in the urban areas where alone modern facilities of communication, health, education, cultural activities and employment opportunities are available—the dichotomy of 'two Indias' as some have chosen to call it. No doubt, there are many altruistic persons and organisations dedicated to humanitarian work in the other India but at best they can wipe the tears off the eyes of a few thousands may be, but not of millions.

Tolstoy wrote: "I sit on a man's back, choking him and making him carry me and yet assure myself and others that I am sorry for him and wish to lighten his load by all possible means—except by getting off his back". Decades later, Aldous Huxley put it brutally, "Hunger and self-government are incompatible: the under-nourished majority will always be ruled from above by the well-fed few".

Inequalities in regional development as of now, coincide with the path of the temporal progress of the East India Company and the establishment of the 'jewel in the crown'. The concentration of poverty today is in the Eastern region where Cornwallis' permanent settlement prevailed. If things are left to the natural propensities of investment then this inequality may increase rather than lessen.

Fortunately, the makers of our Constitution had a perception of these realities and therefore set down the goal of a socialistic and egalitarian republic. The end was unambiguous, not necessarily the path. For instance, the right to property was spelt out as a fundamental right but not the right to work. The dilemma of the times is understandable. That is why it was necessary to append the Directive Principles of the State where more specific objectives were outlined. However, these niceties concern the academicians, the legislators, the judiciary and the government and are of little relevance to the vast numbers of the poor who virtually remain outside the mainstream of the production and distribution systems, because they are unemployed or underemployed with little or no purchasing power. Even the law is often loaded against them. The only instrument of power with the poor is their right to vote.

Given the anatomy of our poverty the strategic choices for elimination of poverty, at least abject and degrading poverty, are few but clear enough.

Planned exploitation and management of our natural resources—land, water, forests and minerals, and the development of human resources through universal literacy, training, health care and employment opportunities; extension and modernisation of infrastructure by way of communication, transport and energy—have to remain in the centre of our development plans for decades to come, as a necessary condition for the elimination of poverty in absolute terms. A redistribution of a national per capita income of 250 dollars cannot take us very far. Even the centrally planned economies recognise that for improved standards of living, continuous growth in net material wealth, through constant upgradation of technology and productivity is the only option open to lately industrialised countries who did not have the historical advantage of high capital accumulation over centuries backed by colonies and empires (This effort may often strain our national resources), but it need not stretch our national will; because by now we have developed many strengths in our economy.

In our concern for equitable distribution we may not ignore the increasing pressure on land and other resources and on employment which our population growth rate portends. Search for effective strategies is still on but it is inceasingly apparent that reduction of poverty and ignorance are probably as much if not more crucial than medical intervention, in controlling demographic trends.

Last but not least, in the context of poverty elimination, is our stance in relation to the global economy to the extent we need to import essential shortages, technology and equipment to maintain our

growth. The process of political decolonisation initiated in the post war era must be completed in the economic sphere as well until a new economic order appears on the horizon. This is bound to be a long struggle (witness the north-south dialogues and the Gatt meetings, described as the 'dialogue of the deaf'). It is evident as the domestic markets saturate in the developed countries, their growth rates can be sustained by the markets of the developing countries Only, such markets cannot absorb the goods and services without credit. Hence the loans, aids, grants and bilateral tied credits. But the direction of development of the debtor countries must be such that does not impair the flow of imports of goods and services and where profitable, of equity, capital. So they are advised not to indulge in uneconomic import substitution, open the doors for free flow of trade and increase their exports, if necessary, by devaluation of their currencies, even though in the process one remains indefinitely in debt. The massive inflow of resources from the developing countries into the developed countries thus continues unabated year after year.

peace for eliminating poverty

Consider also the fact of arms trade between the industrialised countries and the developing ones. For some industrial countries, it is on the top of their export list running into billions of dollars. Can this be hived off without seriously affecting their economies? If not, the market for such merchandise of destruction can only grow if country A is perpetually locked in combat with country B or country C is made to feel constantly under threat of attack from country D—all of them wooing the industrial powers for the latest engine of anihilation and the entire world held in the fear of nuclear missiles and space war. Consider then its effect on the resources of poor countries, the likes of us.

Clearly then global peace and disarmanent are necessary though not sufficient preconditions for abolition of poverty in such countries. Neither "pax Romanna" nor "pax Brittanica" could achieve what "pax terra" alone can. The meek shall not certainly inherit the earth so long as they remain meek. Nor can poverty elimination and nuclear missiles be on the same flight path.

Science and technology as tools of development, historically have been commandeered by the dominant power structure determining the direction of development. But in our case it can be a potent instrument for meeting the massive minimum needs of the countryside, leaping across conventional and expensive market modes. Today we have the knowledge and the people with us and even perhaps the motivation, but conditions have to be created to liberate their latent initiative, particularly of the highly trained youth.

As to the key question of redistribution of income, assets and opportunities, it remains more a matter of socio-political process of change than of planned economic development. The latter can at best garibi ghatao before it can garibi hatao, and through its direct programmes of poverty alleviation soften the harsh edges of poverty. Decentralisation and democratisation of power structure implied in our Constitution can alone create a base for equitable redistribution of the fruits of development. The pace and priorities of planned development can of course hasten or retard the process.

(contd. from P. 17)

and ensuring that it has enough loopholes for a whole herd of elephants to march through : if we can plug the large leaks and correct the distortions in the Integrated Rural Development Programme which is now adding assets to those with assets : if we can make the Differential Interest Rate loans apply only to the assetless small artisan and small trader, for him to create and build his assets : if we can bring the Cooperatives back to its original purpose of being a common and joint ownership of individual and community assets : and if we can stop talking and passing ineffective laws, and really handover enterprises and the majority of their shares to the workers. On top, we should use the usual drastic remedies of periodic demonetization, tighten our penal laws and raids to put black money holders in jail for life terms, and apply the severe deterring punishment provided in our FERA and COFEPOSA legislations (which we are careful not to enforce) to those holding their money abroad in tax free havens (who are usually the richest of the rich) Can we do this? This is what I have termed the near impossible. It calls for a real national renaissance : when we, the rich and powerful, give up a part of our riches and most of our powers and when the poor are given real freedom to organise themselves and fight against their exploitation and for their rights. Without such a turn around, we shall be simply going around in the present vicious circle, of quarrelling over how many are the poor, of how many have been brought up above the poverty line, and of inventing more and more programmes for the poor beneficiaries, which some how find their way to the non-poor.

If that renaissance comes about, then we will have a society with accelerated economic growth, which is a 'necessary' condition to reduce poverty : and there can be an effective beneficiary-oriented programme of real land reforms, of real rural development and of real employment generation, with 'black wealth and incomes' flowing into our 'white' gross domestic capital formation, which will reduce inequalities. □□

Educate people to eradicate poverty

Prof. P. N. Srivastava

Education is one of the mightiest tools that the developed countries of the world have used to root out economic poverty and bring in prosperity for their people. The author, Prof. Srivastava, Member, Planning Commission and former Vice-Chancellor of JNU, has painfully recorded that the importance of education, as a sure means to eradicate destitution, has not been duly recognised in our development programmes. He has cited the example of Japan, where emphasis on education was given almost a hundred years ago. Today, Japan is harvesting the fruits of the efforts that were made much earlier in the field of education. He also makes it clear that unless there is active people's participation in the expansion of education, only governmental endeavours would not help. Before independence, individuals and organisations contributed 25 per cent towards educational expenditure, by way of donations. Today it has been reduced to 3 per cent. He sounds a note of caution when he says that let us not forget that we are not going to get peace if only about one-third of the upper strata of the population participates in our growth, and they alone get its benefits.

I AM REALLY HAPPY THAT YOJANA is bringing out a special issue on "Anatomy of Poverty" while we are celebrating 40th year of our independence. While it is true that forty years is not a long time in the history of an independent nation but still the time has not been that short either not to have reduced our poverty level to a much greater degree. It is sad that after 40 years of our independence, about 40% of our population is below the poverty line and let us not forget that we are not going to get peace if only about one-third of the upper strata of the population participates in our growth and they alone get its benefits.

the brighter side

Let us not get too pessimistic either. Our achievements during the last 40 years have also been high. Our food production has increased from about 40 million tonnes to over 150 million tonnes so much so that in spite of such a severe drought, perhaps worst in the century, we did not have to import food;

our life span has increased from 35 years to 57 years; our literacy rate has increased from 16 per cent to 37 per cent; our power generating capacity has gone up from about 2000 MW to 5200 MW; steel production has gone up from less than 1.0 million tonnes of saleable steel to over 8.0 million tonnes; cement production has gone up from less than 3.0 million tonnes to over 32.0 million tonnes; crude oil production has increased from a negligible level to over 30.0 million tonnes, coal production from 30.0 million tonnes to over 155 million tonnes; iron ore production from less than 3 million tonnes to over 42 million tonnes. In short, while we were importing almost everything when we got our independence, India today produces practically everything from pins to all kinds of machinery and equipment. Our progress in the sophisticated areas of nuclear technology, space technology including its own rockets and satellites, has been spectacular.

Together with the above achievements, our population has also grown from about 350 million to more than 770 million—more than double. Our growth rate forty years back was 1.25 per cent while today it is 2.2 per cent. Our population is only next to that of China, but our density of population is twice that of China. India has a population density of 230 persons per sq. km. as against 110 persons per sq. km. in China. We are doubling our population in about 35 years. For any country, this will be a tremendous task to provide food, health facilities, education and other basic amenities to such a growing population.

not a happy view

India is one of the poorest countries in the world with a per capita income of about U.S. $ 280. The Government must concern itself primarily with the income and well being of the poor, not just those who fall below the poverty line, but also the many millions, who are only a little above this line. The aspirations of the vast numbers of poor people are limited. They only wish for the ready availability of essential consumer goods at prices they can afford and a sustainable source of livelihood. In the Seventh Plan Document and in the 20-Point Programme, there is a great deal which aims at meeting these aspirations. The Minimum Needs Programme, which is meant to meet the basic necessities like elementary education, primary health care, water supply and sanitation, roads and electricity, perhaps does not receive the commitment or attention that it needs. Perhaps a strong political will to achieve the targets in the Minimum Needs Programme is also lacking. There are many good programmes, but the way they are implemented, their benefits do not accrue to those for whom they were meant. The implementation lacks commitment, which becomes less and less as we go down the Government hierarchy. It is perhaps advisable and necessary to involve the people of the locality in the developmental programmes, who could function as watch-dogs for proper utilization of funds and efficient implementation of programmes.

education for development

Let me take up the issue of the anatomy of poverty. It is tragic that the nation did no treat education as a crucial area of investment for national development and survival after we achieved our independence. Universalisation of education, which is enshrined in no less a document than our Constitution, should have been achieved long time back. We are still fixing a date to achieve this target. Education is a basic pre-requisite for the removal of poverty and the development of any country. This is a fact of history shown by all the developed countries in the world. More than hundred years back, Japan, which is quoted so much by so many people, first of all laid stress on this. In our New National Policy on Education, the target dates laid down now for eradication of illiteracy among the population in the age group of 15-35 years have been fixed for 1995. This was emphasized even in the Kothari Commission Report on Education, which had culminated in the National Policy on Education 1968. This was not done. This document had also emphasized the role of vocationalisation in education. At that time, 6.5% of the students were under vocational stream. We did change the pattern of education and brought in the 10 + 2 system for vocationalisation, but it was never implemented the way it should have been and today we have less than 3% of the students under this stream. The only part of the Education Commission Document, which was really implemented, was on agriculture and we have seen its results. How are we going to look at the anatomy of poverty if we are not going to look to education as an investment in the removal of poverty? Today some of the less developed African countries are spending 6% of their GNP on education, while we are approaching 4.0%. Many developed countries are spending 9-10% of the GNP on education. It is unfortunate but true that we are not looking into the future with correct perspective. It will be difficult to bring a dent on poverty if we do not lay greater stress on education, health and

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agriculture. Once universalisation of education has been achieved, it will provide a large base for the pyramid of excellence to be built. Education, Science and Technology are directly related to the development and prosperity of any country and is inversely related to poverty. It is well known that education contributes to the economic growth significantly - may be upto 25%; it is also significant in reducing poverty and improving income distribution.

highest rate of return

Many studies have shown that investments in elementary education yield the highest rate of return and have a significant impact on productivity and the general well-being of the masses. This we have not done and that is why we see stark-naked skeletal anatomy of poverty everywhere. If education has to play its role effectively in the process of removal of poverty and the development of the nation, it will have to be ensured that all people get the benefit of education irrespective of sexes, social groups and across geographical regions. If this is not done even after 40 years of our independence, the chasm of economic disabilities, regional imbalances and social injustice will grow and widen, further resulting in the building up of disintegrating tensions.

"It may be relevant to know how the developed countries have been able to remove poverty and develop economically. There are about 3.8 million research and development scientists in the world. Of these, 90% are in developed countries, which comprises less than 25% of the total population and the remaining 10% are in the developing countries comprising 75% of the population."

It is impossible to over-estimate the role and importace of science and technology in the development of any country and thus removal of poverty. Science and Technology have already made a significant contribution to our economic development. We are spending about 1% of our GNP for science and technology and the trends are that this will grow further, which is gratifying. It may be relevant to know how the developed countries have been able to remove poverty and develop economically. There are about 3.8 million research and development scientists in the world. Of these, 90% of them are in developed countries, which comprises less than 25 per cent of the total population and the remaining 10% are in the developing countries comprising 75% of the population. In monetary terms, the world today spends about 210 million U.S. dollars per year on R&D. Of this amount, 95% is spent in developed countries and 5% in developing countries. There are 3,000 R&D scientists per million population in the developed countries, while in the developing countries we have only a meagre 125. The number of students in the higher education is also significant. North America has over 5,000 students per 1,00,000 population, while the average for developed countries is 2,500. In Asia and developing countries, it is only 500 per 1,00,000 population.

people's participation required

If education has to be given priority, we will have to find resources. It is unfortunate and tragic that in India, we expect everything to be done by the Government. Funding by individuals, religious organisations, donations and endowments accounted for 25 per cent of the educational expenditure before independence, today it has been reduced to 3%. The share of tuition fee towards education was 45% in 1947; today it is about 12%. The more expensive the courses like engineering and medicine, higher has to be the Government subsidy and the students undertaking these courses have prospects of larger gain. Raising of fee at the higher levels of education and professional courses has been thought of in the New Education Policy. No tuition may be charged from students coming from poorer families, while those coming from the middle income groups may be helped to take soft loans from the banks, if they so desire. Peoples' participation will have to be there if we have to raise resources for education. I will like to end by quoting the Chinese proverb. If you are planning for a year, plant rice; if you are planning for 30 years, plant trees; if you are planning for 100 years, plan education and this is exactly what Japanese had done. Not all contributions of education are measured or are measurable by economists. Educational planning cannot be attempted as entirely on the basis of return, howsoever rational they may be and we see where they are today. Unfortunately, education cannot be regarded as an industry to give fruitful result in five years. One has to wait for at least 15-20 years to achieve results. If we have to remove poverty in our country and to achieve a "society based on justice, social, economic and political: equality of status and of opportunity", which is enshrined in our constitution, we will have to tackle education on a war-footing. It is already too late. It must be done even at the cost of slight reduction in our overall growth rate so that we could achieve much greater benefit 20 years hence. □□□

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Community involvement must for raising living standards

S. M. H. Burney

Poverty in the land of plenty, is a real paradox. The author, a senior and seasoned administrator, and a scholar as well, has earnestly traced the causes of poverty, in this article. He has enumerated the various steps taken by Government from time to time and has convincingly established the links of these measures with our freedom movement. He is aware of the fact that something radical has to be done and mere "poultices and palliatives" would not help. Despite a phenomenal growth in agriculture and industry, science and technology, and various other fields, destitution, deprivation and disparities are still staring in our face. The author does not subscribe to the current concept of the poverty line which in his opinion can be questioned. In his view, social changes have to be brought not by Government agencies alone, but the entire society has to pool all its resources and energy to blot out the scourge of poverty.

IN ONE OF HIS VERSES Faiz Ahmed Faiz has used a poignant image for the suffering poor :

زندگی کیا کوئی مفلس کی قبا ہے جس میں
ہر گھڑی درد کے پیوند لگے جاتے ہیں

(Zindigi kya koyi muflis ki qaba hai jis main har ghari dard kay paivand lage jatey hain ?)

Is life a cloak, by a poor worn with patches of pangs, so often torn ?

This short couplet draws our attention to three basic features of the phenomenon of poverty : deprivation to the point of utter destitution, incessant misery and intolerable degradation. Poverty is a relative term. The question that confronts us first of all is to give it a specific meaning. Who are the poor ? Where does the poverty line begin? In common parlance the poor is a deprived man, a disadvantaged individual lacking means of minimal subsistence, haunted by insecurity and perpetually

struggling for his livlihood and dwelling. The notion of the quality of life or any refinement is illusory for him. The poor with no resources has insufficiency of means to meet socially accepted minimum needs. Poverty could be seen as a life of undernourishment with chronic malnutrition, insanitary environment and a constant fear of starvation and homelessness. In economic terms, per capita monthly expenditure (in terms of 1960-61 prices) of Rs. 20 has come to be established as an index of poverty line. The updated poverty line according to the Seventh Plan is an annual income of Rs. 6,400|- per household in rural areas and Rs. 7,300|- per household in urban areas which works out to be equivalent to Rs. 20 per capita according to 1960 prices. An overwhelming majority of those who live below the poverty line on this criterion consists of scheduled castes, scheduled tribes, agricultural labourers, marginal farmers and miscellaneous categories of unemployed and underemployed urban workers.

"To a historian of ideas it would be an exciting subject of exploration to study the theories of radical socialist planning and of modern mixed economy which were widely debated in the thirties of the century."

reconstruction of society

It redounds to the glory of our national movement that the goal it set before itself was not only to fight for the emancipation of the country from the fetters of the British rule, but also concrete ideas about the reconstruction of Indian society on sound economic foundations were formulated by our national leaders. They realized the futility of political freedom without economic freedom.

In the British period it was generally believed that India was a rich country inhabited by the poor. Resources were considered to be abundant, though measures for their exploration were not thought of. The bogey of population was created by the colonial rulers. In nationalist circles the British economic politics relating to land tenure, industries, tariff and taxation were held responsible for economic stagnation. Dadabhai Noroji provided a theoretical framework to most of the serious economists on the question of Indian poverty. Noroji was a pcineer in estimating per capita income of Rs. 26|- to show how poor India was but nothing was actually done to measure the magnitude of poverty in the British period. India had suffered greatly from economic stagnation in the colonial period and the colonial structure proved to be the chief obstacle to the development of the country. Mahatma Gandhi prepared a comprehensive plan for the rural reconstruction of Indian society and Jawaharlal Nehru drew up a blueprint for the industrialization of the country. To a historian of iedas it would be an exciting subject of exploration to study the theories of radical socialist planning and of modern mixed economy which were widely debtated in the thirties of the century. As early as 1938, the Indian National Congress set up the National Planning Committee with a view to eradicating poverty and the prevention of concentration of wealth. Some of the Congress leaders condemned the feudalistic structure of Indian society and strongly urged the abolition of zamindari.

The point to emphasise is that the impetus for economic development came from our struggle for political freedom. Indian nationalist leaders were fully aware of the problem of growing inequalities on account of the accumulation of newly-created wealth in a narrow circle. As the income-yielding assets were getting concentrated in a few hands, national leaders suggested radical measures to remove glaring inequalities by the abolition of zamindari, elimination of usury and the nationalisation of industries, etc. They could not ,however, implement these radical measures before independence for obvious reasons, although the Congress had come to form Governments in most of the provinces in the 1937-39 period. But with the dawn of freedom, India was determined to shape her destiny and to build a strong self-reliant society buoyant with confidence and economically independent Socialist Republic where the starving millions have been freed from the shackles of poverty which had crippled them for centuries.

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the record of progress

After forty years of independence we may like to know how far we have succeeded in our endeavours. Where were we in 1947 and where we are now? What has been our achievements and, what our failings? Since 1947 India's economic progress has been impressive as her foodgrains output has trebled from 50 million tonnes in 1950-51 to 150 million tonnes in mid 80s and the industrial output has increased fivefold since independence at a compound rate of 6 per cent. The rate of growth of India's economy rose from 3 per cent till early 60s to a little over 4 per cent during 70s and averaged at about 5 per cent during

the last 7 years. The average of life at birth has doubled from 27 years in 1950-51 to 54 years. Today India is able to meet 85 per cent of her total domestic need for capital goods. Inflation is under control and trade deficit has been reduced significantly. There has been considerable expansion in electricity generation, railway movement and coal production. In the capital market there has been remarkable growth in recent years of new issues approval of Rs. 5,070 crores in April-January 1986-87 as compared with Rs. 2,003 crores and Rs. 3,695 crores in 1984-85 and 1985-86.

This phenomenal economic progress has been maintained despite the fact that since independence India has been involved in four wars, three with Pakistan and one with China, besides the present nuclear threat to the country which has added to the burden of the defence outlay. On account of this and other strains on our economy, the bitter truth has to be recognised that despite the six Five Year Plans and concerted efforts to eliminate poverty today both 'growth' and poverty co-exist in our society. And there is not one India but many Indias—pre-feudal, feudal, capitalist and appalingly poor, contending against each other. Indian economy still remains backward with a low per capita income, unemployment and we have to reckon with the alarming figure of 37.4 crores of our people living below the poverty line. In 1954-55, Prof. Kaldor estimated illegal wealth at Rs. 600 crores. Today unaccounted wealth and income generated by the underground economy is estimated to be about Rs. 6,000 to Rs. 7,000 crores which comes to about half of the country's national income in 1983-84. This is bound to cause poverty for the majority. Illegal money grows like cholera germ thrown into water. Even today 2.4 per cent of landholders own as much as 22.8 per cent of the arable land. According to a recent estimate the growth rate of gross national product (GNP) in1986-87 is expected to be lower than the level of 5.1 per cent in 1985-86. The foodgrain production is expected to be less by 10—15 million tonnes in 1987-88 over the previous year. The country is facing one of the worst droughts, though the redeeming feature is that we have a buffer stock of 28 million tonnes of foodgrains (since reduced to about 18 million tonnes) to meet the critical situation.

need for daring measures

How is it that despite our best intentions and big plans the spectre of poverty still stares us in the face ? Where did we fail and how ? And what can be done to remedy the situation ? Possibly the economic and political exigencies have prevented the leadership from making radical advances. The poultices and palliatives did not help. Probably bold and daring measures needed could not be taken owing to one constraint or another. Surgery we could not resort to : The implementation of land reforms is a case in point. By the time the leadership awoke to the urgency of effective implementation of land ceiling legislation not much land was left to be declared surplus for distribution among the teeming millions of landless labourers and marginal farmers, whose number, if not the proportion, has gone on increasing despite our socialist professions. Further, nothing has been done to impose ceiling on urban land assets (including buildings) let alone urban property in general and income-yielding assets in industry and trade. Despite massive investments in public sector units, the hold of big business and monopoly houses on national economy is much greater today than ever before. On the whole, public sector undertakings are not efficiently run. To crown it all, in recent years, the grip of multinational corporations has tightened further which, in course of time, is bound to accentuate unemployment.

While there has been great deal of debate about the eradication of poverty, there has not been agreement on who the poor are. Different models have been proposed. Poverty lines have been drawn on

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the basis of the Planning Commission's study groups' magic figure of Rs. 20 per month per capita as the minimum desirable level of consumption at 1960-61 prices. The rationale for arriving at this figure is not known. Even if it were known, the desirability of applying a 25 years old norm to the present day India can be questioned. While experts would continue to argue about the proportion of people above|below poverty line in urban and rural India, it must be recognised that even after Seventh Plan 26 per cent people will be still living below the poverty line ; in other words there will be little improvement in the level of living of about two hundred million people a figure not far short of the size of the total population of the USA|USSR.

raising people above poverty line

Naturally in view of the degrading poverty one turns to find remedial measures for its mitigation. A conventional explanation of continuance of poverty and the aggravation of the problem is given in terms of the unmanageably large population and its rate of growth which tends to undo the developmental efforts undertaken by the Government. This has relevance but it would be useful to study the problem in terms of other factors which have

been responsible for our unsatisfactory performance in the matter so that once they have been identified, remedial measures can be taken. Households can be raised above the poverty line by following three ways :—

(a) By giving employment to the involuntarily unemployed and fuller employment to the underemployed;

(b) Even the employed may be poor because of low earnings. So earnings of the employed have to be improved by increasing their skill and through the redistribution of productive assets.

(c) If for technological reasons some people have to remain unemployed and others are not enabled to increase their earnings sufficiently to meet their minimum consumption standards, then society must arrange to transfer income from the better off sections to the suffering masses, the unemployed and the poor, in the forms of doles for the unemployed and liberal subsidies.

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But our experience has been that in these aspects policy action has been impeded. The measures to reduce concentration of lands in the hands of the landed aristocracy aimed at increasing asset ownership of the underprivileged landless labourers and marginal farmers have proved ineffective. So far as the concentration of financial and industrial assets is concerned, no effectual checks have been evolved and it has continued unabated The measures to increase employment from the Third Plan onwards have not produced desired results in view of the simultaneous clamour for technological upgradation and sophistication as an accepted element of growth strategy pursued through the plans. The important place assigned to cottage and small industries has tended to prop up low productivity occupation. Transfer payments through fiscal and other policies have been too meagre either to increase the earning power of the employed or to create substantial volume of employment of the unskilled and semi-skilled labour force. Facilities to expand technical education have not kept pace with the requirements of the situation. Instead we have strengthened the 'enclave' type of development which may under certain socio-economic assumptions lead to the expansions of employment and lessening of poverty in the long run but it is the immediate benefits which really matter for the currently unemployed and the poor. Expansion of employment for the highly trained man-power touches only the fringe of the problems.

The experience of the working of the Integrated Rural Development Programme shows that the provision of assets to all landless agricultural labourers is not possible. Therefore, an unhealthy practice has crept in acquiring assets and the better off sections have been the major beneficiaries of the redistribution measures. In a poor country there are serious limitations to transferring assets|income to the underprivileged through the conventional fiscal measures. This is not to suggest that nothing has been achieved. The point is that the problem of poverty is too formidable to be tackled by these measures. But the radical measures of the socialist type are inconceivable in our political set-up. In fact, we have been reduced to a situation well described by T.S. Eliot in his lines :

We only live,
only suspire;
consumed by
either fire
or fire !

(Little Gidding)

Refashion rural economy

Gandhiji was realistic enough to recognise that the key to India's economic progress lies in the villages. That is why he dreamed the 'Gram Swarajya'. Rural poverty is the biggest challenge to the country. Some of the leading economists have traced the root of India's slow economic growth to the behaviour of her agricultural economy. Despite some of the positive measures undertaken to enhance economic growth, India's rural economy remains backward. There has been a rapid exodus of the rural poor in search of employment to the urban areas, where they get swamped by slum-laden urbanisation. The main programmes, National Rural Employment Programme (NREP) and the more recent Rural Landless Employment Guarantee Programme (RLEGP) have not benefited the rural poor in the desired measure because of their organisation and operational weaknesses. The transfer of assets approach as conceived in these schemes have given scope to corruption and increased the indebtedness of the poor. These schemes provided short term employment but do not in any way enhance the level of the living of the rural poor. On the other hand, the asset base of the rural well-to-do was strengthened, increasing thereby the existing disparities. It is time that these programmes are subjected to a critical review and are refashioned in order to really benefit the poor for whom these were designed.

It is gratifying to note in this context, however, that the overall provision for IRDP has been stepped

up from about Rs. 1,700 crores in the Sixth Plan to about 4,550 crores in the Seventh Plan to be supplemented by 4,000 crores of credits from the banks. It is a pity that not even a limited guarantee for short term employment is provided in Seventh Plan and no distinction made between the wages of the skilled labour that can be gainfully employed and the unskilled manual labour. What is of crucial importance is that wage employed programmes rather than distribution schemes should form a central element in the strategy for poverty alleviation. Effective measures ought to be taken to accelerate the process of creation of additional employment in the rural sector increasing thereby the purchasing power of the marginal cultivators and the rural non-agricultural workers.

Education for elimination of poverty

The Document 'Challenge of Education' published by the Government of India (1985) has attached great importance to the relationship between Education and Development. It has emphasised that education-employment linkage would be mutually compatible. The idea is that education is a formation and investment of strategic human capital and for prevention of economic ills. By transmitting skills, education develops brain power which provides intelligence, drive and tact to gain productive employment. However, over the years the expenditure on education and health has diminished. India is spending on education less than 3 per cent, much less than what advanced countries are spending. It has been calculated that 94.20 per cent of India's rural people have no skill and the incidence of rural illiteracy is high with only 20 per cent literacy among the males and 10 per cent among the females. The figure of 500 million illiterates in India in the year 2000 AD is staggering. A massive skill-formation campaign has been launched through audio-visual techniques of teaching and on the job-training courses. Unless rural illiteracy is banished, there is little hope for making the rural mass economically self-reliant.

Another development which jeopardises economic growth is the pace of deforestation which has not slowed down despite the Government's resolve to hold on to its present cover of 64.8 million hectares. Currently a million hectares of forest land is under encroachment. A recent survey in Orissa has shown that nearly 1194 square kms. of forests were cut every year up to 1981. Deforestation at that rate would only leave 4.6 per cent forest cover by the turn of the century. Ideally about 33 per cent should be under forest cover. A major reason for drought is the massive deforestation and loss of green cover. That has to be stopped. Therefore environment plan should be formulated with a view to maintaining the ecological balance and checking thereby soil erosion, denudation of hills, destruction of watersheds, regulating rainfall and tapping solar energy for human use and preserving mineral wealth.

Critics of India's economic policies have laid the blame on their implementation. Here the role of the bureaucracy, which could act as catalytic agent for social and economic development, is crucial. The Government officers in the developing countries are supposed to be like what the capitalist entrepreneurs were to the economically developed western countries in the eighteenth and nineteenth centuries. It is necessary to create conditions to them playing this role efficiently and effectively. They have to be imbued with a certain amount of idealism, clarity of goal and commitment in the implementation of anti-poverty programmes.

Of late there has been much discussion on how elitism has generated mass consumerism to the neglect of wage goods. Elitism thrives on speculation in shares, high school fees, ostentatious living, five star culture, election financing and all the paraphernalia that goes with it. Dr. V.K.R.V. Rao has warned that elitism is likely to accentuate India's social tensions resulting in class conflict that could disrupt the integrity of the country. Demands-oriented production failed to expand supplies of basic necessaries. Wage goods ultimately are needed to increase the minimum nutritional level of the poor. Even if GNP grows at 5.7 per cent per annum for the remaining thirteen years of this century, poverty may be accentuated if the composition of GNP is not radically changed in favour of the basic goods. This fact has to be grasped.

The question is how are we going to remould our society. Bismarck, a year before he was made to quit as Chancellor of Germany, was asked by an English visitor, 'How have you made Germany great'? Bismarck said, Alone, alone and alone'. Isolation, however splendid, is neither possible nor desirable in our conditions. Though development cannot be imported, it is linked with international economic realities and there has to be global interdependence. Of course, within the ambit of international environment, national interests are of primary importance. Do we have commitment, clarity in the conception of our plans, priorities and the political will to implement them ? It is not a question of putting a stitch here or there or to do what is called social engineering, to improve matters little by little or to limit ourselves to a few specific schemes. On the other hand, we ought to adopt a holistic approach covering all social, economic and educational activities. Social changes are not brought about only by rational plans or intellectual constructs but by the involvement of the whole community imbued with idealism and passion to raise the material and cultural standards for the regeneration of human society. □□□

Poor man, common man

A noted economist

The author has attempted to draw a logical line of demarcation between the common man and the poor man. While the poor man has been defined in absolute terms on the basis of consumption of calories and the rate of per capita income per month, the concept of the common man, who may also be poor, in view of the reigning price of commodities, is not clear. He points out that most industrial goods, like TV, gas stoves and scooters are not within the reach of people with income upto Rs. 18,000 *per annum, although they are far above the accepted poverty line. He has come out with the surprising information that the money spent in protecting one job in a non-viable sick unit is sufficient to create ten jobs under the anti-poverty programmes. He is quite straight forward in telling that under the present distribution of income and assets, those who have, want more, and they usually get it. Therefore, he says, we can not provide relief and subsidies to those above the poverty line as well as to those who are below it. There has to be a choice between the two.*

ALLEVIATION OF POVERTY HAS BEEN central objective of our Plans. While programmes for direct attack on poverty, such as, IRDP or NREP, are of relatively recent origin, each of our plans has given substantial importance to programmes and policies designed to improve the distribution of incomes and reduce disparities. If the actual results have not been upto our expectations, it is certainly not due to lack of imagination or even the will on the part of our planners.

An answer to this puzzle requires an exhaustive and critical examination of our development strategy and its interaction with the political and social system as it has evolved in the post-independence period. This is a fertile field for research by economists and other social scientists. Here, I would like to confine myself only to one "perceptual" problem. which to some extent seems to explain why our anti-poverty strategies and policies sometimes fail to live up to expectation. This is the assumption

that what is good for the "common man" or for the economy must also be good for the "poor man".

The poverty line in India is defined in absolute terms. Thus estimates of poverty are derived by using the poverty line of Rs. 49.09 per capita per month at 1973-74 prices corresponding to daily calorie requirements of 2400 per person in rural areas and the poverty line of Rs. 56.64 per capita per month corresponding to the calorie requirements of 2100 in urban areas. Using the CSO private consumption deflator for latter years, the estimated poverty line per capita per month in rural areas was about Rs. 116 in 1985-86. The corresponding figure for urban areas was Rs. 134 per month. According to this definition of poverty, any person with a

"Any person with a consumption level of above Rs. 1600 per annum in urban areas and Rs. 1300 per annum in rural areas can be considered to be non-poor and above the poverty line. When we speak of removing poverty or poverty related programmes, it is the segment of population below this level of consumption which can be considered to be the target group.

consumption level of above Rs. 1600 per annum in urban areas and Rs. 1300 per annum in rural areas can be considered to be the target group. As the beg- poverty line. When we speak of removing poverty or poverty related programmes, it is the segment of population below this level of consumption which can be considered to be the target group.At the begining of the Seventh Plan about 37 per cent of our population was estimated to be below the poverty line. The number of persons below the poverty line was about 271 million, of which 221 million was in rural areas

the elusive poverty line

There is also a large segment of our population above the poverty line, which can be considered to be relatively poor. For example, the typical industrial worker or a Government servant is no doubt worse off relative to say, a trader. Nevertheless. the fact remains that the minimum salary of a Government servant today is more than Rs. 12,000 per annum and that of an industrial worker even higher. The per capita average emoluments of public sector employees in 1985-86 was Rs. 26,000 per annum. This is by no means excessive to meet the cost of living in urban areas particularly in view of high rent and high prices of common consumption goods. Naturally persons, even though they are employed, feel deprived particularly when they witness the growing affluence and increasing levels of conspicuous consumption by the rich. The rich may be few in number but their life-styles have an important demonstration effect on the welfare perceptions of the common man. However, there is no doubt that in comparison with absolute levels of poverty in our country, the income levels of even the lowly Government servant or industrial worker are fairly high.

Quite a number of our welfare and subsidy programmes are designed to provide relief to the relatively less well off in our society, even though in absolute terms, they are several times better off than the really poor. Take for example, the fiscal policy. The exemption limit from income-tax is Rs. 18,000 per annum. Combined with standard deduction for salaries and certain other concessions, a person with an annual income of Rs 3,000 per month is unlikely to pay any income-tax. The effective exemption limit is nearly 13 times the per capita income of the country and more than 20 times the income levels of persons who are below the poverty line. Yet, there are frequent demands for increasing the exemption limit. Similarly, our tax structure has several concessions for savings. The main beneficiaries of these concessions are persons in the income range above Rs. 35,000 per annum. It may be argued, and perhaps rightly so, that savings concessions in the income-tax are necessary to promote savings by income-tax payers But this does not alter the fact that benefit of these concessions is enjoyed by the very small section of our population whose taxable incomes are many times above the poverty line.

"The rich may be few in number but their life-styles have an important demonstration effect on the welfare perceptions of the common man. However, there is no doubt that in comparison with absolute levels of poverty in our country, the income levels of even the lowly Government servant or industrial worker are fairly high."

We also have a plethora of exemptions from excise duties for production in industries below a certain size. Several industrial products which are believed to be of common consumption are also taxed at relatively low rates. On grounds of promoting industrial development, the dispersal of industries and boosting demand, these concessions may well be justified. However, it is a fact that these are of little or no benefit to persons below the poverty line. A recent survey of household consumption by income classes by the National Council of Applied Economic Research provide several interesting findings. This survey shows that most industrial goods are not consumed by families with household incomes of less than Rs. 9,000 per annum or even Rs. 18,000 per annum. These include almost all durable consumer goods, including black

and white TV, gas stoves, sewing machines, suit cases, scooters, mopeds, and gas ovens. These are bought by less than 20 out of 1000 households having incomes below Rs. 18,000 per annum. Surprisingly, this is also true of several expendable consumer goods, such as toilet soap, biscuits, vanaspati, baby food and film, etc.

multiple ameliorative measures

We spend nearly Rs. 2,000 crores in subsidising distribution of food through the Public Distribution System and a further Rs. 2,500 crore in subsidizing fertilizers. The expansion of Fair Price Shops in urban areas has been impressive. The public distribution system is also an important element in ensuring food security and remunerative prices to the farmers. Nevertheless, it is a fact that the reach of the public distribution system in the rural areas where most of our poor live is limited. It is also interesting to note that some of the States which have the maximum incidence of poverty are also the States which benefit the least from the PDS because of several factors. While there are important economic reasons for food subsidies, the alleviation of absolute poverty is not one of them.

"The public distribution system is also an important element in ensuring food security and remunerative prices to the farmers. Nevertheless, it is a fact that the reach of the public distribution system in the rural areas where most of our poor live is limited."

Government has also taken over large number of sick units from the private sector in order to protect employment in such units. Substantial losses amounting to hundreds of crores of rupees are incurred year after year in sustaining them. In some units, the loss per annum exceeds the total wage bill. The money spent in protecting one job in a non-viable sick unit is sufficient to create ten jobs under the anti-poverty programmes. From a social point of view, there may be a case to protect the jobs of those who are employed in these units. But it is self-evident that this policy, while achieving some other purpose does not benefit those who have no opportunity for employment and whose present levels of consumption as a result are below the poverty line.

The examples of the above type can be multiplied from almost all sectors of our economy. My purpose in mentioning this is not to undermine the important purposes that many of these policies serve or to question the overall economic justification for continuing with them. However, we must face the fact that these policies do not necessarily serve the cause of the poor man living below the poverty line.

In recent years, certain important programmes, particularly the Integrated Rural Development Programme, the National Rural Employment Programme, etc., have been launched which are specifically designed to improve the income earning capacity of those below the poverty line. There is evidence that these programmes have already made an impact on poverty levels, although many deficiencies remain which need to be corrected. However, our total expenditure on these programmes is still less than 1 per cent of our GNP. This is not enough to take care of the massive problem of poverty in rural areas

fundamental requirements

The long term strategy underlying the Seventh Plan seeks to eleminate poverty by the year 2000. The issues involved in working out a proper policy frame for achieving this goal are complex, and it is not clear whether such a policy frame is firmly in place. Our past experience suggests that there are three "fundamental requirements" for working out an effective strategy for elimination of poverty within a relatively short period of 10 to 15 years. These are, by no means sufficient in themselevs, and a number of structural issues including land reforms would require attention. However, unless these fundamental requirements are met nothing else can succeed within a short period.

"The money spent in protecting one job in a non-viable sick unit is sufficient to create ten jobs under the anti-poverty programmes. From a social point of view, there may be a case to protect the jobs of those who are employed in these units."

First and foremost it is essential to raise the rate of savings in the economy While a lot can be said about the relevance of traditional economics to present day problems the central role of capital accumulation in promoting development has not been challenged. In India the rate of domestic saving has remained around 23 per cent since 1979-80. Even this level of saving overstates the rate of capital formation in the economy. The Working Group on Savings under the Chairmanship of Dr. K. N. Raj had observed that the rate of gross fixed capital formation in the closing years of 1970s about 18 per cent of GDP was no higher than in the middle of 1960s and only about two-thirds higher than during the middle of 1950s (when it was about 11 per cent of GDP). The recent data do not indicate any change in this trend.

An increase in domestic savings rate ipso facto implies a reduction in the rate of growth of dilemma in the context of strategy for poverty alleviation. While the rate of growth of aggregate consumption has to be reduced, the level of consumption of the poor has to increase at a faster rate. This dilemma can be resolved only if the rate of growth of consumption of those above the poverty line increases at a rate which is considerably lower than the average

Giving the organisation of our society, and the present distribution of income and assets, those who have, want more and they usually get it. It may also be argued that policies to curb the consumption will affect incentives for growth. One possible route is to regulate the pattern of production, so that the consumption goods, except wage goods are simply not available for some time. This strategy also has pitfalls not the least of which is the possibility of smuggling.

A second fundamental requirement of an effective anti-poverty strategy is that public investment must increase at a substantially faster rate than has been the case in recent years. Investments which have direct relevance to the alleviation of poverty are community investments (e.g. health, education, infrastructure, and irrigation). The market or private enterprise cannot provide effective substitutes for such investments. Non-inflationary financing of higher levels of public investment implies that public savings must increase. This is possible only if productivity of public investments increases and additional savings of the society are mobilised by the public sector. The recent budgetary trends in this respect are, however, disquieting. The Central Budget, for example, shows a negative net savings of over Rs. 5,000 crores in 1987-88 (Budget Estimates) The consumption expenditure has increaseed at an annual rate of 18.5 per cent since 1979-80, which is significantly higher than the growth of national income. Despite substantial increase in tax revenues in the Seventh Plan, the Government is now relying on borrowed funds to meet its own consumption requirements.

A third fundamental requirement is that we must spend more on programmes which attack the problem of poverty directly. Despite many deficiencies, programmes like IRDP and NREP have proved their utility in generating employment and incomes among the very poor. Given the structure of poverty in rural areas, particularly, in tribal, drought prone and hilly areas, a programme of food subsidy for the poor has to be an integral part of the strategy for relieving poverty. Given the resource constraint it is also apparent that the programmes for direct relief of poverty cannot be adequately financed without a substantial reduction in programmes which benefit persons above the poverty line. If policies for redirecting subsidies to the poor and pruning certain other types of Government expenditure can be devised, and there is a strong national consensus behind them the country should be in a position to spend at least three per cent of its GDP on programmes for direct removal of poverty. However we cannot provide relief and subsidies to those above the poverty line as well as those below it. A choice has to be made.

These are difficult issues. It is not clear whether we have the capacity and the will to reorient our policies and our aspirations in the required directions. Perhaps the best that can be realistically expected and actually achieved is to do a little here and a bit there, so that there is still hope for the future. The issues, however, deserve to be debated so that a clear perspective can emerge about the possibility of removing poverty by the end of the century ☐☐☐

> **"An increase in domestic savings rate ipso facto implies a reduction in the rate of growth of consumption. This presents an important policy dilemma in the context of strategy for poverty alleviation. While the rate of growth of aggregate consumption has to be reduced, the level of consumption of the poor has to increase at a faster rate."**

Transformation through technology

Dr. G. N. Seetharam

The world is changing fast. Technology is now the established instrument of transforming society and removing the residues of economic backwardness. The author, a reputed scholar, has vehemently emphasized that a scientific, disciplined and devoted attitude must be developed by all of us in order to face the challenges of the next century. India is rich in human resource, but, the author says, that in the race of revolutionary advances, it is the quality that counts and not quantity. He has expressed his unhappiness over the glaring fact that during the last few years every community is vying with each other to be declared 'backward", simply to extract benefits of reservation. In his view, economic backwardness is closely linked with mental backwardness. Better utilisation of the new media of communication, improving the lot of the people who have been bypassed by modren science and wiping out obscurantism are some of the remedies prescribed by the author for the removal of poverty.

AS THE WORLD MOVES INTO the 21st century profound transformations are taking place which are making it unrecognisable. The heart of these changes is in the unprecedented technological leap-frogging that has enveloped the advanced outposts of civilisation. Future historians may like to divide the whole of history into the pre-computer and computer ages. The computer and revolution has enhanced man's capabilities over creation and destruction at an astronomical pace. The current wave of technological change have no precedent in human history In fact, a future historian might remark that real history started with the computer. Grandiose technologies are enveloping and transforming the world. Biology and genetics have moved to the centre stage. Revolutionary advances are being made in bio-technologies, super-conductivity, robotics, spacedocking technologies, genetics, para-psychology,, computer sciences, medicine, etc. Great advances are being made in communication technologies with the coming of fibre optics. The economic race among nations is primarily a technological one. There is in Japan advance towards the fifth generation computer and even the sixth generation computer. Artificial intelligence may gain

ground. Satellites and tremendous leaps in aviation **technology have made the world a small place.** Webs of inter-dependence are being laid the world over. For the first time in the history of mankind a global community is taking shape. Unprecedented figures of finance and goods, as well as millions of people are crossing national borders. Supra-national organisations like the European Economic Community have crystallised. Distances have started to lose their meaning with digital networks, electric mail, banking, teletype, teletexts and teleconferencing. Pathbreaking work in frontier kind explorations in outer space are taking place.

era of unprecedented advance

The word 'impossible' is receding from the human horizon. Truly this is the era of science & technology. Rapid technological change has almost become a norm. As a conversation went in the famed silicon valley an engineer was asked as to why he had not taken over two weeks leave over the past 3 years, to which the engineer responded that he was afraid the technology might change and he might become obsolescent while he was away! It was thought that English was becoming the universal language but now it seems that computer software packages will be the universal norm. Along with global technology with its epicenter around Stanford University in California and M.I.T. in Massachusetts a global cosmopolitan identity is also spreading. Yoga, Zen, Buddhism, Karate, English, Freud, consumer electronics, seem to be the emerging components of the new global identity crystallizing at the metropolises. So in view of this the primary set of challenges to India over the next 15 years, it appears, will be in the

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"Great advances are being made in communication technologies with the coming of fibre optics. The economic race among nations is primarily a technological one. There is in Japan advance towards the fifth generation computer and even the sixth generation computer. Artificial intelligence may gain ground."

Indian ability to create or absorb and adapt technologies especially in the frontier areas. This task is especially urgent since our neighbour China has launched a modernisation programme which if successful might propel it as an advanced country in science and technology over the next 15-25 years. Great leaps in technological adaptations are also being made in the Southeast Asian and Latin American countries not to speak of the United States, Japan or West Germany. India boasts of the third largest pool of scientific manpower in the world but as things stand we do not even generate 0.1% of new inventions though almost 20% of the world's population is in India This inability to generate technology is not due to a basic lack of intelligence. In fact, Indians along with the Jews are rated as the most intelligent humans in American campuses. It lies in the Indian environment which rewards mediocracy and penalises merit. India is a dangerous country for creative minds. The social norms and attitudes are stifling and curious spirits seek liberation by going to the U.S. Also, our culture lays great stress on the forms of behaviour disregarding the substance. This leads to exaggerated fear, sycophancy and a generally observed lack of self-confidence, self-assertiveness and a lack of personality as such among large sections of the middle class. Courage and inte-

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"The primary set of challenges to India over the next 15 years, it appears, will be in the Indian ability to create or absorb and adapt technologies especially in the frontier areas. This task is especially urgent since our neighbour China has launched a modernisation programme which if successful might propel it as an tion computer. Artificial intelligence may gain next 15-25 years."

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grity are rare commodities in Indian life and without courage to blaze one's own trail, chances of a festival of pioneers is out of question. Most Indian R&D organisations including the CSIR labs are sick. There is a total inability among us to work in groups We fracture and demotivate each other. As a number of behavioural scientists have observed, attitudes in the Indian scientific community are substantially shaped by the "philosophy" of "Maro Goli". The Ph.D. thesis instead of being seen as a first step towards the world of learning is for most Indian researchers, the last step after which they draw rent for the rest of their lives. Asking new questions is not an Indian cultural trait and naturally we do not get answers to questions we have not raised. So unless a cultural transformation takes place among educated Indians the changes of our meaningful participation in global technological transformations is very low indeed.

bias towards metaphysics

The reading habit has almost deserted this country. It is a shocking state of affairs. Also, many Indian scholars find the answers to whatever questions they may have, in the Vedanta. So thoughts get arrested at that level. It is also true that among the more scholarly of Indians, there is a heavy bias towards metaphysics which ultimately ends in philosophical speculation rather than pragmatic action. Also, there is a lack of leadership capabilities at all levels. Transformational, path-breaking leadership of a Jawaharlal Nehru, a Homi Bhaba, a J.R.D. Tata, etc. is rare in modern India.

and, unless, we tackle all these racial deficiencies among ourselves as well as create a conducive environment of social dynamism with an element of humanism, we may miss the bus of the great technological revolution sweeping the world and become a large slum of backwardness The danger is actual.

the human resources challenges

Closely associated with the technological challenges are the human resource challenges. In ancient times land was the primary factor of wealth. During the last few centuries natural resources and entrepreneurial abilities emerged as key factors. But now the key factor which will make or mar the country is the effectiveness of human resource use. It is not the quantity of human resources that matter but the quality. Human resources akin to those who largely parasite in our offices and factories are a positive hindrance to the development process. What is needed is healthy, intelligent, hard working and innovating human beings with daring. The Japanese experience clearly drives home the point. It is reinforced by the experience of resource-poor nations of South-east Asia as well as Switzerland. On the other hand, relatively resource-rich countries like the U S R.R. China and India have lagged behind among other factors due to the poor productive capabilities of their populations (This is already not true of China). Human intelligence and creativity are the keys to the technological changes in the third and the fourth waves a la Toffler, and it is here that our social and educational policies can play a role in generating discipline, hard working, intelligent and innovative human beings who believe in themselves and their control over their fates. Unfortunately our social policies are retrogressive in the sense that there are great incentives for being backward and great penalties for being 'forward'. A society cannot expect to launch itself on gaint leaps in progress if it penalizes merit, resourcefulness and entrepreneurial abilities. Such is the system in India that over the past few years every

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community is trying to become "backward" so as to avail of the reservations. Surely a society where everyone claims to be more stupid than he or she is, has got its priorities wrong somewhere. It should be remembered that our population by the end of this century will be roughly 1,000 million and almost 450 million of them will be communities which either due to force of circumstances or voluntarily due to obscurantism, have been largely by-passed

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by modern science and technology. It will require a leadership of tremendous courage to push these communities on the path to modernisation without taking into account the backlash. Unfortunately, obscurantism and fundamentalism are gripping other sections of our population also including the most resourceful Indians. A vertiable war would have to be fought over these tendencies. Also, our educational system will have to be revamped in such a manner so as to discourage role-learning and encourage exploration and creativity. The value ethos should revamped with dignity of labour having a central role in the schools. Also, family planning must be vigorously encouraged. Numerous data once again bring to the fore the point that children from small families on the whole achieve more than children from big families. Also, the first child is usually a better performer than the following ones. Children from larger families (especially under the poverty line) grow up below their true genetic potential due to malnutrition. If human resource quality is the ultimate determinant of the 21st Century, as undoubtedly it is, then India should be taking revolutionary steps to upgrade the quality of Indians at least in the coming generation. India is a country of young people but unfortunately almost 80% of our younger compatriots are suffering, from some form or the other of malnutrition. Every third Indian child is born under-weight. Racial degradation is on its way. It can be stopped and remanaged. Action in that direction must start now

Closely related to the human resource challenge is the communication challenge. By the turn of the century there would be about 30—40 million T.V. sets in the country. There will be a tremendous spurt of VCRs and other communication media. The point is to use the unprecedented potentialities of the new medium in order to bring about the desired value & bevehicural changes

The determining factor which will decide as to in what shape India will enter the 21st century will be the quality of leadership which will not be afraid of facing temporary set backs and unpopularity in the march towards a great and technologically advanced India ☐☐☐

Poverty of commitment

Prof. C. J. Daswani

Avarice, selfishness, self-centredness and gross lack of social commitment, are some of the main factors for the pervasive corruption at all levels, which in turn, is responsible to a large extent for the sorry state of affairs we have come to. Prof. Daswani, a senior educationist, presently working with NCERT, has deftly dealt with the warp and woof of the problem of corruption and has tried to prove that the acceptability of this vice on a mass scale has given rise to the present grim situation. He points out that westernisation, modernisation and industrialisation are usually blamed for the phenomenon of corruption and convincingly argues that this stand is not true. The only hope, he says, is the INDIVIDUAL, who can save the society from a total collapse. The concept of YUGA, according to him, hinges on the consequences of individual action. Since society is composed of individuals, the more socially committed, socially conscious people we have, the less risk of corruption we run. Perhaps, in such a society, the rich would not lust to become richer, and would happily share their fortunes with their less fortunate fellow-beings.

PEOPLE IN INDIA TODAY SEEM to have accepted corruption as a way of life. Everyone, no matter how high or low, is convinced that corruption has entered the very blood-stream of the Indian society. Of course, one hears many reasons for why things have come to such a sorry pass. One also hears people say that things have gone from bad to worse; that the situation was never so grim. One hears that even forty years ago when we won our freedom, things were not as bad as they are now.

Some people also tell that we should not worry too much about corruption because it is a world-wide phenomenon. All over the world, they tell you, corruption is a way of life. Or, they tell you, that corruption is nothing new; there have always been corrupt people in India as elsewhere in the world.

The question really is not whether corruption is old or global. No one can deny the fact that both truth and falsehood have existed side by side in the human world, that honesty and corruption have always been with us here in India and elsewhere. The question really is about how pervading has corruption been.

Corruption can be measured on two intersecting continua. One continuum, may be seen to measure the acceptability of corruption as a part of life, going from 'totally unacceptable' to 'fully acceptable'; and the other continuum measures the pervasiveness of corruption, going from 'limited' to 'widespread', or from 'controlled' to 'uncontrolled'.

These two intersecting continua, then, give us four 'extreme' combinations :

(1) corruption that is 'unacceptable and limited',

(2) at the other extreme corruption that is 'acceptable and widespread',

(3) corruption that is 'unacceptable yet widespread' and,

(4) corruption that is 'acceptable but limited'.

Between these four extreme positions there are indefinitely many positions where corruption is 'more' or 'less' acceptable in intersection with corruption that is 'less' or 'more' widespread.

a multitude of factors

How acceptable and how widespread the phenomenon of corruption is in a society depends on a multitude of factors. Tradition, culture, moral and ethical value system, social structure and perhaps, also, economic well-being, all together determine whether corruption is an acceptable way of life in a society, or whether it is widespread or limited. Corruption in a society is never a fixed or 'once-for-all' phenomenon. As a result of complex changes in the fabric of society, corruption becomes more a way of life, or the society moves from a more corrupt to a less corrupt or more honest way of life.

Interpreted within this matrix one can argue that the Indian people at large have moved away from an 'unacceptable and limited' form of corruption to a 'more acceptable and more widespread' form.

We might say that although there was corruption earlier, it was never an accepted way of life and it was limited to a fewer number of people. The corrupt were looked down upon and all acts of corruption were covertly transacted. A corrupt person was never a respected or valued member of the society. Today it would seem, corruption has not only become more widespread, but it has become more acceptable as a way of life. Acts of corruption are transacted covertly, and corrupt people no longer have to hang their heads in shame or run the risk of social ostracism.

This may, then, help us understand why people feel that there is a greater degree of corruption in our society today. One might conclude that in the past the Indian society was less corrupt because corruption was neither generally acceptable nor widespread. If that is so, the question that arises is: Why have we become more corrupt?

But, before we turn to that question, there is another aspect of corruption to consider. The word 'corruption' carries only negative meaning; it is the opposite of 'honesty'. No matter how corrupt a society is, corruption is never seen as a virtue. Also, no matter how widespread corruption may be, its positive value, honesty, is always seen as an attribute. Perhaps that is why even a corrupt society extols honesty, and one is told how 'honest' or 'trustworthy' a corrupt person is. One often hears of public servants who will perform a job for a consideration, and it is said of some such people that once they accept the bribe they can be trusted to 'honestly' fulfil their part of the deal!

We must clearly recognise that it is this unethical or immoral connotation of corruption that makes even the most corrupt person deny his corruption. Typically, in a corrupt society, a person often claims that he alone is honest and the others around him are dishonest and corrupt. Only when corruption has become very widespread and largely acceptable as a way of life, will one hear people admit that everyone is corrupt.

What is frightening about the Indian situation today is that we have started to admit that we are all corrupt! Should we then give in to despair and accept the fact that corruption has overtaken the entire society and that there is no hope? Yet, since we are ready to recognise the seriousness of the malady, there must be some hope of redemption.

shift in moral value

Let us return to the question of how we have become more corrupt as a people. Corruption, it would seem, is the result, and not the cause, of a shift in the moral-ethical value system of a society. This may seem self evident or even trite; that we have become more corrupt because we are less honest as a people than we were. But let us examine this question a little more deeply. If we accept as true the charge that the Indian society has become more corrupt today, then we imply that for some reason corruption has become more acceptable or and more widespread today than it was in the past. The question then is to look for the reason why corruption is more acceptable and widespread. What has led to this shift in our value system?

Although one talks of a corrupt society, corruption is, in fact, perpetrated by individuals. Indeed, honesty too is practiced by individuals, although we talk of honest societies. There is, however, a basic difference. A corrupt act is always detrimental in some way, while an honest act is not. A corrupt act is nefarious, designed to hurt others, while benefiting the corrupt. An honest act, even if it may unwittingly hurt someone, is never meant to benefit one at the cost of another. A corrupt act is by its very nature, selfish and mean, while an honest act is selfless and benign. A corrupt society is made up largely of individuals who have self-interest uppermost in their transactions, and an honest society is comprised largely of individuals who are not motivated solely by self-interest. In a corrupt society there is low premium on social commitment, while in an honest society the people are conscious of their social roles and duties.

degree of social commitment

What is being argued here is that both honesty and corruption are functions of the degree of social commitment that a people feel. An honest society results from a general sense of social commitment among the people at large, and a corrupt society is the result of a declining sense of social commitment leading to greed, avarice, selfishness and dishonesty. Honesty is in direct proportion to social commitment and corruption is in inverse proposition. The Indian society today is more corrupt than before because the Indian people are less socially committed than they were in the past.

sense of concern for others

In other words, at least in the last forty years, we have seen a general and rapid decline in level of social or national commitment among the people. More and more people are concerned with self-interest. There is a greatly reduced sense of concern for others. One sees this lack of commitment manifest itself in many ways. The producers of goods and services are not committed to quality, the businessman is not committed to honesty, the professional is not committed to integrity, the young are not committed to discipline, the schools are not committed to teaching, the administration is not committed to the rule of law, the politicians are not committed to the public weal.

One must hasten to add that this lack of commitment is not a black-or-white or, none-or-all situation. What seems to be true is that social or national commitment has the least priority in the scheme of things. The 'self' comes first, next comes the family, followed by the social group or the organization, and the nation and national interest come last.

avarice—the main cause

Why do we find ourselves in this sorry plight? How did we get there? It would be tempting to find economic justifications, or blame the situation on Westernization or modernization, or even industrialization. Perhaps all these factors have contributed to the situation. But we cannot run away from the basic fact that avarice and acquisitiveness have been the main causes of the break-down of the moral-ethical values in the Indian society. Every Indian today, from the richest to the poorest, is interested only in acquiring 'things' for himself, his family and his immediate kith and kin. 'What is in it for me?' is the motto and the philosophy of every Indian today. It is this all-pervading self-interest that has led to a general deterioration in the moral standards which has led to an all-round corruption.

"Today it would seem, corruption has not only become more widespread, but it has become more acceptable as a way of life. Acts of corruption are transacted overtly, and corrupt people no longer have to hang their heads in shame or run the risk of social ostracism".

Is everyhing lost then? Is there no remedy? Can we raise the level of commitment in our people? Who can we turn to? What sources of strength can we tap to recapture the days of greater commitment and public honesty?

the elimination game

There is little comfort, and much less hope, to be had when we look around. If self-interest undermines commitment and gives rise to corruption, then our situation would seem to be hopeless. National and public institutions have become prey to self-interest of individuals as much as private institutions and organisations. The educational system holds out very little hope. In a selfish society, the system only trains people in competition and elimination. Elimination is a circular game. As you eliminate those who are 'weaker' than you, you are eliminated by someone 'stronger' but the 'weak-strong' opposition is not coterminous with 'high-low' or necessarily the same as 'rich-poor'. The hunter is at the same time the hunted, and no one is always 'weak' or always 'strong'. It is a dynamic game. Only the instinct of survival and the law of the jungle prevail. The educators, like the administrators, or the managers, or the servants, are participants in the elimination game.

Even when there is some evidence of higher commitment it seems to be motivated by group-interest, rather than national interest. Temporary outbursts of national commitment are as short-lived as the events-sports and wars—that produce them. The children and the young adolescents, the natural romantics, are unfortunately corrupted into acquisitiveness long before they can see the perniciousness of their training. The situation is truly quite alarming.

Strangely enough, a corrupt society is seldom a 'happy' society. In a corrupt society everyone is full of fear. Courage and fearlessness are makers of an honest and committed society. The one emotion that seems to dominate the Indian psyche today is fear. Everyone is afraid. The hunter as much as the hunted is afraid. If one were to ask why people are afraid, there would be no single answer. But there is fear everywhere. And fear, like corruption, feeds upon itself.

Where lies our hope, then? Can we bring about a change in our moral-ethical valure system to regenerate a sense of commitment and honesty and thereby banish corruption from our society?

Individual is the hope

The hope, it would seem, lies partly in the very centre of the cancer of corruption. The *individual*. The very individual whose personal and selfish lust for material gain makes him blind to his social responsibility and commitment. And the other part of the hope must lie in our tradition which also places the individual at the centre of all action. The Indian tradition has always focused on the individual as the initiator, the agent and the actor. The very concept of *yuga* hinges on the consequences of individual action

It is not surprising that our tradition holds every individual, Valmiki-like, responsible for his action. The individual must work out his salvation through honesty, social commitment and moral behaviour. And, perhaps, that is why the corrupt in our society are fearful. This fear is not merely of the immediate consequences of a corrupt act, but the fear of natural or divine justice. It is this deeply seated tradition that still finds corruption not fully acceptable even when it has become widespread.

Our only hope, then, is in raising the level of individual consciousness; in strengthening the basic concept of individual action and societal good. We must become aware that an honest society can only be a sum of honest individuals. □□□

Poverty alleviation—issues and options

Prof. Kamta Prasad

That measures adopted for the alleviation of poverty have not created the impact that was expected, is no longer a matter of controversy. The author, an economic thinker, having extensive experience as an adviser and consultant in rural development, has made a sincere analysis of the various steps taken by our planners to eliminate poverty and has given understandable reasons why they were not able to produce the desired results. Laudable though the steps were, they were taken without enough thoughts being given to the full implications of a particular line of action, he says. One can perhaps wait for the day when our society gets ideologically prepared for a revolutionary change in the system, but, the task of raising the standard of the ever-growing number of the poor, is an urgent one and can brook no delay. The author has given concrete suggestions for the reorientation of the schemes, which he hopes, might bring down the level of deprivation. In his view, a combination of support to agriculture and the development of rural industries, backed by appropriate technology, would help create conditions which could weaken the roots of destitution.

IT IS NOT EASY TO IDENTIFY any other country in the world which may be having as much and as long and varied an experience as India has in dealing with the problem of poverty interpreted here in the sense of deprivation of basic material requisites for human survival. There is hardly an approach or a strategy relevant to poverty alleviation which has not been tried at some time or the other in India's long quest for finding a solution to this problem. And yet the problem continues to defy all solutions with its overall magnitude showing not much of a change. It is true that the 1983 poverty data as released by the government claims a marked reduction by 11% during the preceding six years. But, 1983 was an exceptionally good year for Indian agriculture. That year's quantum of agricultural production has not been surpassed since then. Hence, the poverty figures of that year can not be regarded as representative of the period as a whole.

approaches to alleviation

Why has poverty along with its various manifestations like malnutrition, over-crowding, dirt, squlaor, disease, slum housing conditions, infant mortality, etc persisted even though alleviation of poverty in one form or the other has always been an objective of planning from the fifties and more particularly since the seventies? Can it be cured at all as the Government proclaims to do so? Are the authorities aware of the issues involved? Have they understood the dynamics of the problem and realised the magnitudes of the tasks involved? Or are we mere beating about the bush? Let us look at these aspects in some depth.

The main components of the strategy adopted so far for alleviation of poverty have been (a) reliance on overall growth rate through the trickle down mechanism, (b) distribution of land to the landless in rural areas, (c) investment in human capital through

education and training, (d) creation of additional employment opportunities through specific schemes for the weaker sections like the SFDA, the IRDP, the NREP, the RLEGP, the EGS, etc. Taken together, these exhaust all possibilities since they touch up the basic causes responsible for poverty, namely, lack of assets, skills or remunerative jobs on the part of the poor. Some of the approaches are structural and some technocratic. All of them have been in operation for the last ten years. And yet the problem persists.

The reason why these approaches, all laudable in themselves, have not produced the desired result is that none of them have been tried with full force and vigour. They go to a certain extent but rather than completing their journey stop much before the midway, the moment some hard surface emerges. This happens because the steps are taken in an amateurish fashion without enough thoughts being given to the full implications of a proposed line of action. It is the poverty of thinking on the part of planners and administrators which has been mainly responsible for the poverty of the teeming millions.

trickle-down strategy

Take, for example, the so-called trickle down strategy which once dominated the scene. As is well known, the earlier five year plans, more particularly the first three ones, hoped to tackle the poverty problem mainly through programmes of overall development. But questions related to the magnitude of the required growth rate, its feasibility and the time to be taken by it were hardly considered seriously. A Perspective Planning Division document in 1962 which made some exploratory study, came with the finding that a growth rate of 7 per cent was necessary to generate enough income to raise by 1975-76 the third lowest decile of population above the poverty line by assuming that the share of this decile in total income would remain the same. It also estimated that the average consumption of the poorest 20 per cent of the population would be more than doubled while that of the richest 20 per cent would increase by only 20 per cent. But how would this be brought about? The paper was almost silent on this. It was merely a statistical exercise. However, even this was not attempted by our five year plans. The question was never asked as to whether the growth rates of three to five per cent which were within the realm of feasibility, were capable of alleviating poverty and if so in how many years? How can poverty be reduced if unemployment and underemployment went on rising? The lesson that it had for the choice of technique and inter-regional allocation of resources was hardly taken into account. The so-called "spread effects" of development did not spread because of imperfect integration of the economic system. It were, therefore, the "backwash effects" which became more prominent in the poverty-concentration areas. Any attempt to avail of this option now must be made in the light of a full discussion of the issues of the type indicated above.

land transfer

The structural approach to poverty alleviation revolves mainly around transfer of land to the poor. This is, indeed, a very effective approach. The basic reason why the rural poor have low income is that they possess little or no cultivable land. The experience of China shows how this approach can be relied upon to tackle poverty. This strategy, though tried since the late fifties and early sixties and more particularly since July 1972, has never occupied a dominent position in the fight against poverty. The issue is whether it can be made so as some of its proponents advocate quite forcefully.

At this stage, it may not be out of place to note that ceiling surplus land identified so far has been only 1.8 per cent of the cultivated area in the country and the beneficiaries of land transfer constitute as low as 6 per cent of agricultural labourers. The land available through existing ceiling legislation is pitifully small to meet the requirements of poverty alleviation. Something is possible only by a drastic reduction in the ceiling limit. But by how much, one does not know. It would obviously depend upon the quantity of land needed for poverty alleviation? This, in turn, raises a further question. How much land per family is needed in different agro-climatic and irrigation situations so as to enable it to cross the poverty line? How far is it feasible to obtain that much land? What level of ceiling would be necessary for that? Would that affect only the large land holders or also the middle or lower peasantry? If the latter, then would that be feasible under the prevailing socio-economic context and power structure? And given the individualistic nature of the our socio-economic system, what will be the effect of all these on sub-division of holdings and prospects of efficient cultivation? Should communal ownership or cooperative farming among the landless of a type that took place in China, be made a pre-condition for land transfer? Would the poor then be willing to accept this? Will dependence on land alone be enough to banish poverty? Or should this be accompanied by a massive programme of rural industrialisation where the surplus labour force can be transferred—something similar to what took place in China subsequent to land reform? In that case, should not the term structural reform be broadened to include changes in composition of economic activities and providing for an assured position to the poor in the changed structure? Is it possible to bring this about without going through the intermediary process of massive land transfers with their attended political risks of a magnitude which no Government is prepared to bear at least for the time being? One can no doubt wait for the day when society gets ideologically prepared for a revolutionary change in the system. But for how long? Is not

alleviation of poverty an urgent task? And, will not the growth of population and the resultant division of large holdings reduce the amount of surplus land that can be obtained while increasing the need for more land on account of the increase in the population of the poor? It is time the so-called structuralists go beyond the level of generality and work out a practical plan of action in the light of issues raised above.

special programmes

We may now take up the purely technocratic approach indicated by a number of special programmes for the poor like the IRDP, NREP, RLEGP, etc., on which the authorities have come to rely more and more. In a way it is more realistic in view of their inability to pursue the structural approach on the one hand and to raise the growth rate to very high levels on the other. From the point of view of the feasibility, this approach has an advantage over the structural one in the sense that it essentially implies a transfer of different forms of capital goods like livestock, pumpsets, new model charkha, etc., whose overall supply is elastic as against transfer of land whose supply is fixed. It can, therefore, serve its purpose by merely devising a proper strategy for deployment of additional resources. This alternative too has the potential to alleviate poverty and that too in the short run provided it is pursued systematically after realising all its implications and fulfilling the conditions necessary for its success.

The success of this strategy would obviously depend upon the quantum of resources set apart for the purpose. Resources allocated so far have been extremely limited with the result that these programmes have yet to produce the desired impact. So far, these have merely functioned as a mere appendage to the development process. Hence, there is need to extend the coverage in term of number of beneficiary on the basis of realistic estimates of capital output ratios. This would result in reordering of the plan as a whole. Merely focussing the attention on poor implementation while not raising the allocation of resources and consequent reordering of the plan, as has been the case so far, amounts to diverting attention from the main issue. The strategy as operated so far can not remove poverty in a decade even if it is implemented without any flaw. But, if it is to take a much longer time, then would it not be better to resort to measures for bringing about prior socio-economic change needed for structural reform? Massive step-up of funds would, therefore, be needed. From where to get the funds? Given the overall shortage of resources, a substantial increase in resource allocation in favour of programmes for the poor is possible only by preventing the flow of resources to other fields and sectors. This again is not an easy task given the mad race for grabbing resources by every sector and group for its own advancement. This can be possible only by a drastic reorientation of priorities in favour of the poor by the Government and putting a restriction on the undue growth of [illegible] interests well entrenched in different departments and sections of the government itself. If the government can not do this, then it can better forget all about poverty alleviation.

There is also a need to ensure proper utilisation of resources by strengthening the delivery system and raising the quality of schemes. To an extent, this aspect is related to the resources aspect discussed above. How can the State Governments set up a strong implementation machinery if the volume of work to be undertaken by that machinery remains at a low level on account of low outlay? The aspect related to quality of schemes raises several issues. What should be the mix of activities and the mix of programmes in a particular area? These should obviously be determined in the light of techno-economic and socio-economic conditions of the area and should not be kept uniform for the whole country or the State because the conditions vary. In other words, the lower administrative units, i.e., the blocks should be given not a fixed menu of schemes but a menu of their choice out of the available national or state schemes. But the blocks would be in a better position to make an independent choice only if they have a well equipped planning machinery. Decentralisation of the planning process thus emerges as a basic condition for the success of this strategy. This, too, is a difficult task. Productivity of the schemes would increase still further if these form an integral part of the area development approach. Growth of the area provides a framework as well as an opportunity for the development of the poor. First, a list of developmental activities in an area may be drawn and their inter-linkages explored. Then these can be allocated to the poor by appropriate policy measures.

Finally, a word about programme content. Agriculture is the predominant activity in rural areas. It should, therefore, receive priority in any scheme for alleviation of rural poverty. However, agriculture by itself will not be in a position to provide remunerative jobs to all the rural poor. This is specially true for agriculture in backward areas which have a concentration of the poor. Hence, the development of rural industries has to be given a very high priority. This, in turn, would require a comprehensive policy on choice of appropriate technology for different types of industries, preferential treatment to employment-oriented rural industries and possible restriction on growth of some large scale industries. This again is not an easy task as the experience of the last four decades since Independence clearly points out.

Thus poverty alleviating in the short run is not going to be an easy task whichever strategy we may select. But the difficulties appear to be less in the case of the last strategy because this requires a reorientation essentially within the governmental set up. Strategies requiring a prior social reorganisation would be even more difficult. □□□□

Our greatest asset–the people

Prof. R. Jayaswal

The author, a renowned sociologist, has projected the theory that the developing countries, including India, are facing obstacles that are not of domestic origin, but emerge from the operational tactics of an international system. In his view, they are the outgrowth of colonial inheritance. He thinks that the technological advancement, economic growth and development strategies of the developing countries are still being manipulated either ideologically or through control of means, by overseas forces. Explaining the causes of the poor remaining poor, he says that the benefit of the investments made by the Government do not essentially percolate to the last strata of the social structure. The middle level agents siphon off a sizeable portion of the flowing funds to serve their own interest and those of the upper class. In the process, the poor remain dependent on seepages and residuals. The author proposes the creation of an active society in which knowledge and skill are the main transforming forces, and conditions that cause barriers between persons and groups are completely overcome. Coming to a reasonably acceptable conclusion he remarks that in both the capitalist and socialist systems oppression has remained a rule and the quality of social life has been a major casualty.

POVERTY IS THE GREATEST CHALLENGE for development, specially in the Third World countries. Although the phenomenon as such is not of recent origin and has existed since ages, its gravity and awareness has sufficiently increased during the present century due to rapid pace of technological and economic development. Consumer societies, dominated by market economy and materialistic orientation have been the natural outcome of such development process. It has further resulted into a clear-cut division of the countries as rich and the poor A growing sense of relative deprivation in this state, appears to be a major guiding force for the choice of development models and strategies. Universal measures of economic growth and indicators of poverty based on personal income distribution, consumer expenditure, nutritional norms of minimum calories etc. too have emerged to provide a particularistic

orientation to the whole development process. It has led to dependence to such an extent that today alternatives seem to be almost blocked for choosing one's own destiny.

outgrowth of colonial inheritance

Although conditions in the developing countries are far different from those in advanced capitalist nations, the mainstream of development thought has still been rooted in traditional neoclassical economics. Even the revision of development strategies during the 1970s too has been dominated by the orthodox liberal ideology of an international harmony of interests, which has further helped victimization in a disguised manner. In this context, it is notable that major obstacles in the developing countries are not of domestic origin but virtually emerge from the operational tactics of an international system. Myrdal's thesis of 'backwash effect' significantly explains this phenomenon, which visualizes that these effects could outweigh the factors that made for the spread of prosperity (spread effect) from rich to poor countries. Besides it, the conceptual supremacy of 'development' in political as well as in academic contexts has been an outgrowth of colonial inheritance in ideology and system of education in most of the Third world countries; which in a manner, exposits the Western notion of progress as the only and last resort for their survival in the existing order. Whereas, the notion of poverty is essentially relative and always to be viewed in a comparative perspective, rooted in cultural perceptions and subjective overtones.

"Whereas, the notion of poverty is essentially relative and always to be viewed in a comparative perspective, rooted in cultural perceptions and subjective overtones."

In most of the developing countries, poverty has become de-meaning and de-humanising on account of co-existing dazzling prosperity of few developed countries. The feeling of deprivation is also becoming acute with increasing realization of the economic impact of colonial exploitation and pains of prevailing system of development, where dependence on developed countries is almost essential both for survival and growth.

ensuring distributive justice

It is on this account, a large number of developing countries are finding it difficult to choose their own path of development which may ensure distributive justice and equal opportunities to their citizens. Their technological advancement, economic growth and development strategies are still manipulated either ideologically or through control of means by overseas forces. It is therefore, some of the following issues have gained now a days prominance among the developing countries :

(i) Growth vs. Distribution.—i.e., controversy of measuring economic growth in terms of gross national product or per-capita income without taking into account the aspects of distributive justice and improvement in the quality of life of the poor masses;

(ii) Agricultural vs. Industrial development.—The question of relative priority and of large investment in the sector;

(iii) Urban vs. Rural bias in planning.—i.e. urban development at the cost of rural areas|masses or concentration of income, resources and amenities in urban areas;

(iv) Capital vs. Labour intensive technologies.—The controversy of option between advance modern and appropriate technologies;

(v) Centralization vs. decentralization in decision making.—Especially in the realm of economy and polity. Although economists like H. W. Singer have long maintained that "a high-income society can be socially under developed", this realization had not made much difference to the prevailing economic conception of development. Similarly, Peter F. Drucker has accepted as early as in 1973 discussing the new challenges that "wherever we have contributed only the economic factors of production, especially capital, we have not achieved development .... Development, in other words, is a matter of human energies rather than economic wealth"; and had also proclaimed that—"management is fast becoming the central resource of the developed countries and the basic need of the developing ones".

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percolation of development

Generally, the problems of under-development are seen rooted in poverty. The per-capita income, consumer expenditure, and nutritional norms are assumed to be linked with the low economic level

and poor living standards. The impact of poverty is projected at times so vividly that it succeeds in generating its own culture, where superstitions, fatalism, day to day problems and concerns are only dominant themes. But most of the problems of underdevelopment do not stem necessarily from poverty as usually described. They are more or less caused by the social structure and at times are undesired outcomes of a particular development mode. In developing societies, the existing vertical stratification and horizontal relationships are real obstacles to development. In these sort of semifeudal societies, benefits of investment do not essentially percolate upto the last strata of the structure. The development investment is basically monopolized here by a smaller upper class. Hardly a fraction reaches to the poor after being extracted by middle level brokers, who have both vertical and horizontal linkages to serve the interests of their own and upper classes. Thus in this given system the poor majority virtually do not have any direct access to investment and remain dependent on seepages or residuals. Greater investment does not lessen the choking but increases monopolization through new institutional means, replacing individual efforts. On account of this percolatory system of development even the notion of people's participation through voluntary organisation is becoming an illusion. A large number of research studies have described that mostly these organisations are controlled and manipulated by the emerging elites. In fact, these institutions due to apathy and lack of organised protest from the poor, largely serve the interests of the proprietory classes. Besides it, in the capitalist mode of development, which has clear urban-industrial leaning, the biggest victims are rural poor and the tribals, whether it may

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be a case of urban or industrial area development, dam or power generation project construction, or of other plants and road building. In this realm, regular administrative processes of land acquisition and displacement of people, have caused more tensions and turmoils in the life of rural and tribal masses than poverty. Exploitation of the poor is so multilateral that the problem could not be eradicated by State charity or welfare programmes only on the economic front. The key to solution lies with increasing the productivity of the poor and choosing an alternate development approach, which could ensure equitable distribution of income, resources and opportunities. Thus, development, in this sense does not end with eradication of poverty, but actually it begins, where the poverty, i.e. to say, scarcity of resources, lack of opportunity and despair ends. Taking in view such notions of development, a management perspective attuned to the needs of developing countries is timely and utmost desired.

social commitment, the basic need

Such a perspective of development management entails complimentaries between economic growth

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and social justice. It could be broadly considered as an approach to generate potentialities among the poor masses so that they may become masters of their own destiny. It actually leads to developing the human resources, conceiving people as the greatest asset. The approach adheres a 'self-determinist model of development', which refers to the motivation of the people to actively guide their own concerns and behaviours; to demand greater responsiveness on the part of the government to ensure social justice and all in all, to seek to determine and procure a life pattern based on the Indian value system. Such a value system gives more prominance to simplicity and happiness in life than a never ending passion for affluence and material comforts. It does not treat 'the other as hell' but asserts on interdependence and cooperation for social progress and prosperity. It calls for social commitment in all walks of life and discards individual endeavours at the cost of group cohesiveness or solidarity. In it, even rationality has a moral base and science|technology too have their own ethical code. It does not claim that 'old is gold' or 'new is fascinating' but emphasizes on keeping the golden old and rejecting the fatuous new. Looking beyond or cosmopolitanism for the sake of knowledge is not prohibited but blind imitation is certainly undesirable in its realm.

The above approach is methodical in achieving the objective of an 'active society', which tends to be master of itself and it is under perpetual self-transformation to respond continually to the needs of its members. The desired components for building such a society are (a) self-conscious and knowing actors, (b) one or more goals that actors are committed to realise collectively, and (c) access to opportunities in

the realm of power/resource; that allows the actors to reset the socio-economic order. In essence, development management is methodical and systematic discharge of all such functions that are essential to transform a poverty-stricken society into an active society.

creating an active society

The active society makes greater efforts to realise values and to explore barriers that deter society realizing these values. In transforming the society

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in such a way that social groups would better realize their collective wants and goals, the active society would improve the public opinion process by striving for more adequately informed public and more active participation. Knowledge and skill learning in this realm are the main transforming forces. Finally, the endeavour to overcome conditions that alienate persons and groups, would be the prime concern of the active society.

The management approach to development basically attempts to remove the inauthenticity of development; that is to say, there is an illusion of participating in development affairs with little actual effect; that is to say, there is an appearance of responsiveness while the underlying conditions remain alienating. Hence, in transforming society through making masses capable of active participation in the development process; so as to reduce alienation and inauthenticity, the approach has been conceived as the central mechanics for societal guidance, mobilisation of masses and enhancing consensus. The inherent assumption is that social development catalysed or mediated through application of approach will lead masses towards greater awakening, which shall help the members of the society to earn competence in finding out the ways to solve their problems, both individually or collectively as desired in particular situation. The increasing awareness or knowledgeability acquired on account of development will ultimately serve as criterion for evaluating the social desirability of consequent changes

Finally, the approach treats that—development is never complete, it is relative, more or less, of it being possible. It is a state of mind, a tendency, a direction rather than mere a focused goal. Such conceptualization makes it sufficiently distinct from the ongoing trend of development administration, which has two aspects: the development of administration and the administration of development and which basically accepts the public administration system as an integral part of the development process. The management approach does not opt a pathological viewpoint, therefore it rejects injecting or administering development, instead it pleades for managing human resources in an unorganised setting. The manager in this realm is an agent of the society, charged with responsibility of not only establishing an egalitarian social order but to organise masses and manage their development in such a manner that they themselves become competent to attain social justice.

In sum, development thinking in its long course has now reached to a critical point where there is an emergent need of intervention. Both, the capitalistic and socialistic planning modes and administrative paradigms of development, are in a flux. If

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the capitalist system has produced a crazy society, the socialist system has given birth to a regimental society; oppression had remained a rule in both. The quality of social life has been the major casuality in both the systems. Pathological social conditions and upsurge of psycholetic culture in the western capitalist countries and inhibited, repressed social life of the socialist blocks, are self-evident facts of these existing politico-economic orders. Henceforth, a confluent approach of professional management is essential for eradication of poverty and development of the poor. □□□

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Socio-cultural dimensions of poverty

Kameshwar Chaudhary

In this article, the author, a UGC Research Scholar of JNU, has explained the causes of poverty in historical perspective, right from the vedic times down to the present computer days. Referring to authentic sources, he has tried to conclusively prove that there has been no "golden age" in the past we so often talk about. Alongwith the end of the colonial rule, which accelerated the pace of poverty, the old social order also slipped to gradual decay. People's participation in the freedom movement brought new awareness of rights and they came into forefront of national life. In his view the impact of planned measures taken to remove the increasing pauperisation has not been very encouraging because of consumerism and the accumulation of the sources of wealth in the hands of the elite. The author has pointed out that in our Constitution, while the right to property and ownership of means of production has been incorporated as "fundamental right", the right to work and the right to education have been declared "directive principles". He has suggested that a radical social restructuring is called for.

POVERTY HAS BEEN DEFINED according to the conventions of the society in which it occurs. There are two broad approaches to poverty: relative deprivation approach and nutritional approach. According to the former, individuals, families and groups in the population can be said to be in poverty when they are excluded from average living patterns, custom and activities in society because of their lack of resources such as wealth, income, education and political power. In the latter, poverty is measured on the basis of availability of minimum nutrients required by an individual or a family or a group as a whole to maintain health and working capacity.

In developed countries the relative deprivation approach has been adopted to measure the magnitude of poverty. However, most studies on developing countries have applied the nutritional approach

for their estimate. In case of India, it is assumed that a reference individual requires about 2250 calories per day—to be obtained from the entire diet range of cereals—pulses, fruits, meat, eggs etc.

Both the approaches lack a coherent philosophy of poverty. They do not have a proper vision of a decent human existence. In the relative deprivation approach, there is no limit put to individual's whims and desires or acquisition of various resources which would lead to dehumanization of individuals and moral degeneration of society. Further, fulfilment of the minimum food requirements is necessary but not sufficient for a decent human existence.

"In our opinion, the concept of poverty must be based on essential food and non-food requirements, such as, clothing, housing, education, health and recreation. Moreover, it should put a limit to the consumerist attitude of the people."

The minimum non-food requirements are equally important which have not been taken into account in the nutritional approach. In our opinion, the concept of poverty must be based on essential food and non-food requirements, such as, clothing, housing, education, health and recreation. Moreover, it should put a limit to the consumerist attitude of the people.

A balanced analysis of poverty in India must include both social and individual plus objective and subjective aspects of the problem and their way of interaction in a historical perspective.

historical background

No golden age in the past could be imagined. We always have had the problem of poverty with us. Early literature contains a few references to this effect. In the third book of the Rig Veda in hymn 8 a prayer is offered to God to drive away poverty and famine. The problem of 'general' poverty was inherent in the structure of society. Rigvedic society (1500 B.C.) as a whole was tribal, pastoral, semi-nomadic and egalitarian. That society became agricultural in later Vedic times (100-600 B.C.), but its primitive agriculture did not yield much, and so the rulers could not get much at the cost of the peasants. The class-divided society based on the Varna System came into full view in pos-Vedic time (i.e. from 600 B.C. onwards). The Brahmanas and the Kshatriyas who constituted the ruling class lived on the surplus produced by the Vaishyas and Sudras. Unlike the phenomenon of 'general' poverty in the Vedic period, now poverty became an integral part of social inequality caused by unequal distribution of social resources.

The ruling class enjoyed all privileges and 'the masses' faced the problem of absolute poverty (especialy during famines) in the ancient and medieval periods. Rajatarangini of Kalhana refers to a drought in 917 A.D. as follows :

"One could scarcely see the water in the Jhelum, entirely covered as the river was with corpses soaked and swollen by the water in which they had been long lying......The king's ministers and guards became wealthy as they amassed riches by selling stocks of rice at high prices". In one of the bad years of the so-called 'golden age' of Shah Jahan "Destitution at last reached such a pitch that men began to devour each other, and the flesh of a son was referred to his love". (Badshahnama of Abdul Hamid).

During the colonial period the Indian economy was subordinated to serve the interests of British trade and industry which accentuated the problem of poverty in India. William Digby has calculated that, in all, over 28,825,000 people died during famines from 1854 to 1901. The incidence of frequent famines and the high losses of life in them indicate the extent to which poverty and starvation had taken root in India.

In the ancient and medieval periods, poverty was considered a natural phenomenon. Its moral justification was provided by the 'theory of karma' which holds that poverty in the present is the result of one's 'papakarma' performed in one's earlier births. And to ameliorate one's condition at present one has to do 'punyakarmas' including the performance of varna-dharma. Moreover, it was the 'moral' responsibility of the king, the lord and the rich to give charity to the poor. This gave a lot of stability to the traditional inegalitarian social order.

"The vast mass of unemployed persons, large sections of the owners of uneconomic holdings, the mass of poor peasants and agricultural labourers remain largely unaffected by governmental measures."

social responsibility of improving standard

But participation of the people in the national movement brought them into the forefront of national life. The adoption of a democratic set-up gave an honoured place to the people. The government took the 'social' responsibility of improving the quality of life of the poor. Our Constitution aimed at providing adequate means of livelihood to all citizens, making a proper distribution of the material resources and preventing concentration of wealth The government has made concerted efforts to alleviate poverty over the successive five-year plans by adopting first the "trickle down" approach and then "direct attack" approach.

But the ovrall impact of geovernment policy has been very disappointing. The growth of the economy has been very slow. It is admitted that around 40 per cent of the population comes below the ill-defined poverty line after four decades of Independence. Another 30 per cent of the population can reasonably be included in this category if only education and health are taken into account while defining the poverty line. Further, the small gains of development has been cornered by the upper middle and the richer sections of the society thereby increasing the concentration of wealth. The vast mass of unemployed persons, large sections of the owners of uneconomic holdings, the mass of poor peasants and agricultural labourers remain largely unaffected by governmental measures. Moreover, the existing target group oriented programmes do not cover urban poor whose number is increasing progressively because of rural migration to cities.

causes

The failure of governmental efforts in eradicating poverty has been generally attributed to rising population, havocs of natural calamities and character deficiency of individuals. In fact, poverty in India is a social product and not a natural phenomenon. It is socially generated and sustained. It is a by-product of extreme social inequality resulting from differental access to economic, political and social bases of power of different sections of the population. Sources of poverty lie in the socio-economic and cultural organisation of the society. Demographic natural and psychological factors are mainly its manifestations though they also play an important role in perpetuating social inequality and poverty.

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The problem of poverty has always been with us But it was accentuated as a result of the colonial rule. British rule smashed the native social and economic structure. A sudden and quick collapse of the urban handicrafts led to pauperization of urban and rural artisans. Exploitation of the peasants by the trinity of landlords, moneylenders and the British resulted into large-scale proletarianization and pauperization. British economic exploitation, the drain of wealth to Britain, stagnant agriculture and deindustrialization reduced the Indian people to extreme poverty.

Further, introduction of money economy and commercialization of agriculture gave a fatal blow to the Jajmani system. This system had for centuries tied together economically, socially and culturally the various occupational groups (castes) in villages into a well-knit structure of patron-client relationship. Generally, all the occupational groups serve one another and got reward in service or kind without any hindrance posed by caste barriers. Because of its decline during the British period and afterwards, the whole rural structure was shattered and the poor forefeited the charity of the rich and became more vulnerable to poverty and consequent death.

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The persistence of wide-spread poverty after Independence is largely due to the reactionary role played by the power elite in our country. In reality, the British transferred power to the Indian elite and not to the people. Despite declaring India a socialist, secular and democratic republic the elite has followed a policy of self-aggrandisement. Right to property and ownership of means of production which is the basis of capitalism has been incorporated as 'fundamental right' in the Constitution. But all the socialist ideals such as right to work and right to education have been declared 'directive principles of state policy' which are legally not enforceable.

The character of the elite explains its attitude towards the problem of poverty. Broadly speaking, at the macro-level it can be said that this class is more urban than rural, landed rather than landless, big propertied rather than small propertied, educated rather than uneducated. A bias for the rich and against the poor is built into the very development strategy. Since Independence, the major emphasis has been given on economic growth rather than distributive justice. The elite have created a world of affluence for themselves while the three-fourth of the population lives below a reasonably defined poverty line.

Another major factor of poverty lies in the economic structure and spirit of our society. The whole of the agricultural sector is under private ownership. Despite aiming at the 'mixed economy' the public sector constitutes a minor segment of our economy. Even that is created to serve the needs of the private sectors by making available roads, communication networks and capital-intensive inputs which

they could not build on their own. Moreover, the priority in agricultural sector has been on promoting capitalist farming, yielding rich dividends to the big and substantial farmers and proletarianization of the marginal farmers.

Further, the difficulty lies in the operational value struc'ure in our society. The guiding ethics of our socio-psycho and economic behaviour are fulfilment of self-interests and maximization of private profit. Social concern is nowhere visible. Material culture has taken an upper hand over humanitarian moves. There is a mad rush, especially among the elite for raising social status by acquiring all the symbols of modernity by adopting any unscrupulous means e.g., corruption, smuggling, etc. The whole chain of adjustments through art, culture and religion by the traditional Indians has been battered but new one not yet established. The net result of our material and moral poverty is alienation, dehumanization and brutalization of individual personality.

Lastly, the "culture of poverty" also plays an important role in persistence of poverty. It refers to the way of life shared by the poor people. The poor have strong feelings of marginality, of helplessness, of dependence, of inferiority, sense of resignation fatalism and low level of aspiration. These tendencies are perpetuated from generation to generation because of its effect on the children who are not psychologically geared to take full advantage of the changing conditions or increased opportunities that occur in their life time. Hence, the problem of poverty remains with us.

eradication

The prospect of eradication of poverty in India is bleak in the near future. The failure of governmental approach from 'trickle down' to 'direct attack' is very evident. Unlike developed countries, such social work approach are not feasible for ameliorating the condition of the vast masses of the poor in a developing country like ours. We have to work for effecting a radical restructuring of our society. The whole social ethos has to be changed. We have to wage a war for ending social inequality and the problem of povetry will be automatically resolved with it. First priority in our planning has to be given to social justice and equitable redistribution. Assault has to be made on increasing concentration of wealth. Land should go to the tillers as promised during the national movement and public sector should be expanded progressively to encompass the whole economy with increasing participation of the labour in management. Labour-intensive technology and programmes of development such as irrigation, housing and communication should be given utmost priority to remove the problem of large-scale unemployment and underemployment.

Equal access to essential social services like education and health should be provided to all. And wide disparities in salaries of employees should be significantly reduced. Moreover, we have to put an end to the developing consumerist culture, especially among the elites, which had a very bad impact on the society as a whole. Our ideal constitutional values of justice, equality and freedom have to be realised in practice banish our material and moral poverty

When we observe the present political scenario it seems such a radical social restructuring could be achieved only gradually over a long period of time. At the moment there is essentially a struggle for power between ruling and non-ruling elites at the national, regional and local levels. But all the ruling parties have to gradually go, if they stick to their present programme of action. The poor of the land would not be kept under control for long after the gradual disintegration of traditional social order. There has been an increase in the social awareness and consequent protests and struggles (sporadic as well as organised) of the poor. Their increasing political participation will ultimately change the power structure in their favour Radical social restructuring has to take place under the leadership of the masses if the elites miss the opportunity of discharging their social responsibility.

"Since Independence, the major emphasis has been given on economic growth rather than distributive justice. The elite have created a world of affluence for themselves while the three-fourth of the population lives below a reasonably defined poverty line."

Poverty—challenge, response and some questions

Bharat Dogra

The author, in this piece, has very graphically outlined the different dimensions of deprivation, particularly in the rural and tribal areas. Having a first-hand experience of working among the village masses, his study of their various problems carries authenticity and objectivity. His probe reveals that while on paper land has been distributed to the tribals, in practice they have not been able to occupy a significant share. Government should be given the credit to enact laws, prepare programmes and design projects to remove poverty and bring a large number of benefits to the weaker sections of the society. But unfortunately, the implementation of these beneficial programmes, in several cases, is more in letter than in spirit. Somewhere at some point there appears to be some "understanding" between the exploiters and the programme implementing agencies. Where such "understanding" has been eliminated, a change for better has definitely come.

AT THE TIME OF INDEPENDENCE poverty was the biggest problem (or issue) before our country and forty years later today poverty still remains the biggest problem before our country. This basic point may be asserted with confidence and with little risk of contradiction without getting into controversies of the problem getting better or worse, the number of people below the poverty line then and now and the norms of drawing the poverty line.

However, a few words need to be nevertheless said about the meaning of the word 'poverty'. There is a lot of merit in the conventional approach of looking at poverty in terms of the denial of basic needs, most prominently nutrition (including access to drinking water) and housing. But instead of merely asking whether the cash necessary for meeting these minimum requirements is being earned, we should go a step further and inquire into how the cash is being earned and how it is being spent. It is possible that to earn this cash or to meet these requirements the work that has to be done is so hard or hazardous that it has a very damaging effect on the health of the worker. It is also possible that to earn this

cash such frequent and uncertain migration has to be resorted to that the family life of the worker is completely disrupted. As for the spending pattern, it has to be asked to what extent higher spending on tobacco, alcohol, drugs, prostitution-not to mention the various 'demonstration' expenses and forced saving for such social evils as dowry, leads to the denial of basic needs for many.

A related question is that of basic needs in the specific context of women. Several families may be getting adequate cash incomes to meet the needs of these families, but either because of the general neglect of women's needs, or because of the ill-treatment of the daughter-in-law, or the problem of alcoholism etc. among the men, the women may be denied basic needs. A similar concern needs to be voiced regarding the basic needs of old people. India had a rich tradition in this respect but this seems to be changing fast.

The various faces of poverty

So far the concept of 'poverty' has only been discussed in the context of the conventional 'basic needs' approach although a wider interpretation has been given to it. However, we may go a step further to apply some other criteria as well. The number of people in villages and urban settlements who live in terror of dacoits, anti-social and communal elements and sadly, also several irresponsible police officials is quite large. A related matter is the denial of dignity in everyday life to harijans and other socially backward people—if we take up caste—related discrimination—and to women, if we take up such related discrimination—and to other groups. So the craving for security and dignity in everyday life is an acutely felt need of a very large number of people still today, long after the foreign rulers have left, although whether we include it in the concept of poverty may be debatable. Similarly it may be debated how the increase in indebtedness, unemployment and inequalities should be tackled in the debate on poverty. In the green revolution villages, for instance, we frequenty see that the increase in indebtedness of the farmers, economic inequalities among the various sections of the village population and the problem of the educated unemployed have worsened life in several ways although cash inflows have certainly increased. If we go still further and talk of "the richness of life" in a positive sense instead of just speaking of poverty, we may ask how the sense of brotherhood, the urge of being a good neighbour, or the wider social|national identity have been strengthened or adversely affected in recent years.

As a journalist specialising in development issues—and in the Indian context I interpret these issues mainly in terms of the poverty problem and the efforts being able to reduce it—I've been visiting several areas and talking to several people here with a view to understanding the nature of the problem and how it has responded to the various 'strategies' and 'policies' and 'programmes' to reduce its extent and intensity. Having done this in same areas over a period of about a decade or so by now, it is possible to speak on this subject with some perspective.

Partha region of Banda district (Uttar Pradesh) is known for the acute poverty and misery of its Kol tribals. If their basic problems are studied closely then in their own perception these are—shortage of land, shortage of irrigation, shortage of drinking water, erosion of livelihood derived from forests and terror of dacoits, landlords and police. Steps have been taken to overcome or reduce all these problems and their results need to be examined.

On paper, for instance, adequate land has been distributed among the Kols. On paper, very big landholdings above ceiling limits do not exist and so sharp inequalities also do not exist. But in practice the Kols have not been able to occupy a significant share of the land given to them. In practice a few landlords do own or control very large chunks of land much above the ceiling limit. Is there an unwritten agreement with the big land owners that they have only to make some paper adjustments and bribe the officials to escape the ceiling laws unscathed, or are the laws themselves so faulty that the honest officials find their hands tied, or do powerful politicians pressurise them not to take action, or do the lower officials under the influence of big landowners misguide the higher officials? Probably the answer is a mix of these several factors, but the fact remains that (1) tribals have experienced land-alienation over the past one or two generations (2) more recent efforts to undo this damage by ceiling laws and land redistribution programmes have by and large failed to make a significant impact.

"In the green revolution villages, for instance, we frequently see that the increase in indebtedness of the farmers, economic inequalities among the various sections of the village population and the problem of the educated unemployed have worsened life in several ways although cash in-flows have certainly increased."

In the case of irrigation, questions are raised here regarding usefulness of big dams like Bardaha, Maro, etc. as the irrigation benefits have not been significant. Small check dams draw a more positive response but contractors frequently selected from among local big landowners have not at all been careful in keeping in mind the interests of the poor Kol farmers while implementing these projects.

Expensive drinking water schemes (based on multiple lifts and a network of pipelines) have also been implemented but relative to the high costs, the limit-

ed benefits obtained have been questioned. On the other hand the potential of several small, relatively inexpensive schemes has not been tapped to the desired extent.

The case of the forest produce

In the case of forests, to a substantial extent the contractors who had so far dominated the exploitation of forest produce have actually been removed. At one stage there was a lot of tension on account of the local influential contractors ganging up against the forest corporation. Yet promised benefits to the weaker sections, supposed to follow from the change-over from the contractor system, have still not accrued. The tender leaf collectors, for instance, agree that the rates given for this work by the corporation are higher compared to the contractors, but there are so many delays in the payment made by the corporation that the benefit is lost. Interestingly the biggest contractor in private conversation with a social worker said recently that he doesn't feel antagonised towards the corporation and in fact, he said that such is his relationship with the men working here that he would not like to say anything against it. So it appears that some new relationships have been worked out which probably come into play at the time of the auction of the forest-produce, due to which the biggest among the vested interest are still quite happy The bamboo artisans are very unhappy even after the advent of the corporation as the corporation does not sell them bamboos in small quantities as needed by them. Worst of all the forest department has been staking its claim to big chunks of land cultivated by Kols and cutting them from it

As for the terror of the dacoits and landlords and irresponsible police officials, this has continued unabated right through the eight or nine years during which this writer has been visiting this area. A very expensive and elaborate anti-dacoity drive launched recently ended up in failure, apart from resulting in horror stories of police-harrassment

Misplacement of priorities

Thus it is clear that the government's response to the basic problems as perceived by the people here has been very inadequate and distorted and so these problems have not been tackled to any significant extent. At the same time several loan-cum-subsidy programmes aimed at income generation among the poor have witnessed rapid expansion. Had the basic problems been tackled effectively, the scope for the better performance of these programmes could have also increased. But in the absence of such success, the emphasis on such programmes appears to be a case of distorted priorities, specially in the light of the several irregularities which mar the implementation of these programmes also.

Not effectively tackling the basic problems but instead putting a lot of emphasis on some other programmes, this in a nutshell sums up the poverty eradication effort in several other areas also. For instance in a village where it may be perfectly clear to the weaker sections, that the most important answer to their economic problems lies in the redistribution of land, water and other resources, if the government functionary puts his main emphasis on subsidised loans for purchase of buffaloes, the people can hardly be blamed for not being very enthusiastic to this approach towards the reduction of poverty.

Implementing the letter, not the spirit

Let's now look at the problem of poverty in an entirely different context. In Garhwal region a long term trend has been towards deforestation and the consequent soil-erosion, fodder shortage etc., leading to lower prospects of agriculture as well as animal husbandry apart from resulting in the shortage of daily needs specially water and fuel. This led to the migration of young men in search of work. This in turn probably brought in more cash, but if poverty is also to be seen in the context of the ever increasing drudgery of women in fetching fuel, fodder and water across steep slopes and long distances, or the disruption of family life, then poverty is increasing from several points of view. Now about a decade back the government recongnised the havoc caused by continued felling of trees and put a ban on it above a certain height. Unconvetional as this description may sound, I would like to see this as an important anti-poverty step for which the government also deserves praise. But has it been implemented in the right spirit? Till several years after this moratorium came into force, chir pines continued to be bled profusely and in illegal ways to extract the maximum rium came into force, chir pines continued to be bled would fall down even in mild storms—and in this way a lot of trees continued to be destroyed At some places illegal felling of trees continued unchecked Worst of all, violating the spirit of the order, several local officials started denying even the forest based basic needs of the local villagers, or else blocked the construction of an important road or school if one or two trees were coming in the way, blaming it all on the ban on cutting trees and the people who had struggled for it.

In Durg district of Madhya Pradesh, the iron-ore miners of Dalli-Rajhara were organised under the Chhatisgarh Mines Shramik Sangh (CMSS) to demand an end of the contract system of working the mines, a demand that will do much to end the exploitation of miners and to which the government is itself committed to implement as per its policy. Apart from carrying out this struggle, CMSS implemented some other anti-poverty programmes including a successful antiliquor movement (such movements have rarely succeeded amongst miners) and an equally fruitful health programme for workers. But unfortunately the overall attitude of the Government towards the CMSS during the last decade of its existence has been an

(carried on page 70)

RESERVED FOR READERS

Tax agricultural income

Please accept my congratulations on the remarkable, full of information, the August 15 special issue of the Yojana. The issue has given a good account of our progress that we have made in the last 40 years since independence in various fields.

I am referring to the indepth analysis provided by Dr. B. B. Bhattacharya on equitable agricultural growth. The article is very revealing and deserves attention if we want to achieve the objective of growth with social justice.

. In this connection I would like to add that the Government policy has been mainly responsible for increasing the gap between rich and poor in rural areas. First, the case of fertilizer subsidy which has mostly benefited rich and big farmers (according to a study by NCAER of the total supplies of subsidized fertilizer, the small farmers accounted for just ten per cent). This subsidy has become inequitous due to two reasons One is, it favours the large farmers who consume more fertiliser and, secondly, it, by increasing the deficit (budgetary) and ultimately leading to increased pressure on prices, hits the poorest class of the economy which in fact is unindexed against inflation.

Thus Government should abolish the fertilizer subsidy and foodgrains prices be revised upwards and amounts so realised should be provided to financial institutions like commercial banks, cooperative banks, RRBS etc., to give loans to small and marginal farmers.

Secondly, by not accepting the recommendation of the Raj Committee on Agricultural Income tax the Government has only helped increase the income disparities in rural areas, whereas through subsidized power tariff rates and irrigation rates and other subsidized agricultural inputs, the large farmers take full benefit of various schemes and concessions offered by the Government. They in turn yield little by way of taxes to the Government. In this regard agricultural income tax will not only reduce the inequalities in the villages but provide adequate funds which the Government can use for local development of rural economy.

—Deepak Kumar,
Lala Ka Bazar
MEERUT

Efficiency in Public Sector

I have read with interest the article captioned 'Improving efficiency in Public sector' by Dr. H. Sadhak, as published in the issue of 'Yojana' for the period June 16—30, 1987. The author has made an analytical study of the factors, which, if given proper attention, could result in greater efficiency in the Public Sector. It is felt that the following other aspects also need attention of the concerned authorities for the purpose of bringing out the desired improvement in the performance of Public Sector :

(a) The Members|Directors of the Board should concentrate on policy issues and resist the temptation to interfere in day-to-day administration of the Public Undertaking. Such interference generally takes place through telephonic or informal contacts with the concerned executive authorities and need to be avoided.

(b) A lot of energy and time of the Public Undertakings is spent in attending to Audit. There is at present dual audit, firstly by the Commercial Auditors and secondly by the Comptroller & Auditor General of India. It would be better if there is only one audit of accounts. This may be done either directly by the Comptroller & Auditor General of India or, under his direction and the guidelines laid down by him by Commercial Auditors. However, subjecting the same accounts to dual audit, is not only vexatious but causes avoidable increase in work. The time, which the various authorities have to devote in getting the accounts audited twice and attending to the observations of Auditors, could instead be better utilised for improving the efficiency of financial management of the Undertaking.

(c) Periodical revision of the price structure and services offered by the Public Undertakings should be allowed to be made by the concerned Undertaking in accordance with the guidelines and criteria laid down by the appropriate authority. At present, there are many external pressures and prolonged procedures for getting clearance and approval to the revision of rates. Time consumed in seeking such approval and following lengthy procedures results in avoidable delay in the required revision of rates and puts the Undertaking to unnecessary and avoidable loss.

(d) Tenure of appointment of the Chief Executive, as laid down under the latest policy, i.e. for 5 years, ought to be adhered to strictly. Besides, positions of the Chief Executive must be filled up on priority and efforts initiated in this behalf at least three

to six months before the earlier incumbent is due for a change, so that the successor may be in position as soon as the previous incumbent is to be relieved. This is because the efficiency and results expected to be achieved by Public Undertakings are dependent to a great extent on continued and uninterrupted leadership of the required calibre. Another point which is noticed in practice is that if, apart from the Managing Director|Chief Executive, there are more than one IAS Officer on the Board of Directors of any Undertaking, generally only the seniormost contributes to the deliberations whereas others, probably out of consideration of courtesy and perhaps as a tradition, do not say anything contrary to the views expressed by the Senior IAS Officer. Therefore, apart from the Managing Director|Chief Executive, there should normally be not more than one IAS Officer on the Board of Directors of any Undertaking. Other vacancies could be filled up through appropriate experts in the required fields, who can be expected to express their views on the issues involved without any fear or favour. This would result in qualitative improvement of the decisions taken and thereby help improve the efficiency of the Undertaking.

—Y. P. Dhir
HAU Campus,
Hisar

RRBs and IRDP

The authors drew some conclusions on the basis of empirical study, i.e., survey conducted in Bihar State. But I have some doubts about their conclusions which I raise as follows :

First of all, they tried to establish link between the repayment and the categories on the basis of the asset|skill they have, instead of taking into account the purpose. The survey would be meaningful if they included purpose-wise categorisation. Because, whether the small farmers or regional farmers or landless labourers, the particular group has more absorbing capacity of the loans under some purpose. The same category cannot absorb the loans under other purpose to that extent. So a marginal farmer who has availed of loan for the purpose in which he can absorb it in a better way may be a regular repayer Otherwise, the same person may be irregular in repaying the loans. So it may be wrong conclusion that this group is more defaulting and that group is less defaulting.

Secondly, the authors came to conclusion that small traders had been able to make the best use of the IRDP loan. On that basis they were comparatively more regular in repayments. But persons under this category may be wrongly selected, (because their income cannot be found out as early as in the case of farmers) or it may have a better and stronger claim on the future IRDP loans. Actually a banker may have more control on any utilisation of land-based activities rather than the activities under service sector.

Thirdly, their data reveals a contradictory statement that small farmers have less tendency to repay the loan fully and more tendency of partial repayment. The reason is not assigned for it. Again purpose-wise categorisation would help. The fact may be like this ; land labourer, may be provided dairy loans but they could not maintain it and animals might have deceased or bank might have settled the claim through insurance. Small farmers might have availed of loan for land-based activities. The loans were fully utilised but they were unable to repay the same due to one or other reasons.

Fourthly, survey did not take into account the industrial sector|rural artisan which has more absorbing capacity of IRDP loans. The authors rightly stressed the necessity of coordination between bankers and beneficiaries. But they have nowhere pointed out the necessity of coordination between bankers and other departments which are directly or indirectly involved in the programme and their responsibilities.

—Sri Vishwanath Bhai
Kampli,
North Kanara,
Karnataka,

(Contd. from P. 68)

unhelpful one. On several occasions CMSS has faced official wrath and repression. This brings us to a cause for serious concern—many very sincere, very hard working people and organisations committed to fighting poverty seem to come into conflict with the government in the course of their work. Why? A sincere search for answers to some such based questions about poverty and the government's response to it—a few of which have been raised here—may be a small step forward in the fight against poverty.

CORRECTION

In the advertisement entitled "Think of the Civil Services" appearing on page 13 of this issue, the last date for sending application for the Combined Civil Services Examination is indicated as '2nd February, 1988'. This may please be read as **'1st February, 1988'.**

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Higher investment, larger employment

Pradeep Kumar Saxena

The pattern and quantum of investment in the various sectors—agricultural, indi trial, etc. have a direct bearing on income, output and employment generation. Hence the need for planned investment. The investment pattern in the 7th Plan gives preference to sectors with higher potential for labour absorption. This, says the author, is a commendable step in the right direction and the same is bound to step up employment generation.

INVESTMENT HAVING MANIFOLD DIMENSIONS plays a strategic role in employment generation particularly in a developing economy like ours. The rate of investment can be said to determine the national income and employment. If investment is slackening, income and employment fall. If investment activity is vigorous, income and employment tend to rise. Investment which is having a direct bearing on income, output and employment is also having a radical indirect impact on distribution of income, regional imbalances, technological advancement, and above all on human resource development.

The choice of a proper investment pattern is the most difficult task for the development planners. The problem of investment criteria involves the principles underlying the allocation of scarce resources in a rational manner so as to increase national income, output and employment. The investment problems o a mixed economy are to be distinguished from thos of a capitalist|socialist economy. In a mixed econom like ours, investment decisions of the private enter prises are motivated by profit maximisation, irrespec tive of the projects which are conducive to economi development. Therefore, it is required for the centra planning authority to make decisions for allocatin scarce resources and to influence the direction o private investment towards development-oriente projects. Regarding public sector investment, stat itself being the entrepreneur has to allocate resource judiciously and utilise these to the optimum extent.

Strategy in Seventh Pla

Unemployment, the most chronic problem of Indi had attracted the attention of the development plan ners right from the beginning of the planning period and its eradication had been mentioned as one o the primary objectives of the planning process in th five year plans. Considering the creation of th employment as a by-product of the development pro cess, it was assumed that with rapid economic growth the goal of full employment itself will be achieved Therefore, till the beginning of the Sixth Plan, n separate or specific strategy for removal of unemploy ment was designed. But unfortunately, it had prove to be a myth and consequently, the rising volume o unemployment has assumed alarming proportions. I was however, the Sixth Plan which accorded to priority for removal of unemployment and poverty a key elements of planning policy.

Seventh Plan, rightly termed as an employmen oriented Plan, makes a dent on the incidence o unemployment. As the outset of plan, the back-log o

ıemployed for the age-group 5 plus has been estiated at 9.2 million. During the plan period, 39 illion persons are expected to join the labour force hile additional employment generation has been :ojected to the tune of 40.4 million standard perıns years, thereby providing full employment to the creasing manpower and narrowing the unemployıent gap to some extent. Though the three main ɔjectives of the Plan are to increase the production ! foodgrains, increase employment opportunities and ıcrease productivity, yet the aim of the employment eneration is the most distinct one. It is evident from he Plan Document which states, "The Central eleıent in the development strategy of the Seventh Plan the generation of productive employment."

Role of agricultural sector

Employment strategy as envisaged in the Plan, ssigns a key role to the growth of agricultural sector ecause it is highly labour absorptive in nature. Since ıe organised industrial sector due to its limited potenal for labour absorption has been unable to relieve ıe pressure of population on land, "it is small scale ıdustries which have to play an important role in mployment generation. It has further to be suppleıented by making rural development programmes ıore effective in the creation of productive assets, and ırough expansion of primary education and basic ealth facilities and through changes in the pattern of ıdustrial growth."

The massive additional employment generation in gricultural sector is likely to be made possible by a onsistent growth in production of foodgrains, dryand|rainfed farming, increasing cropping intensity xpansion of new agricultural technologies to low roductivity regions. Moreover, irrigation, flood conrol and Command Area Development Programmes which are highly employment oriented programmes pecially for weaker sections in the rural areas, have o play a strategic role. Besides, these, National Rural Employment Programme and Rural Landless Employment Guarantee Programme, which were iniiated during the Sixth Plan will also continue.

These programmes are expected to create additional employment of 2498 million mandays i.e. 9.04 million standard persons years in the rural areas. During the Plan period, the annual growth rate of rural labour force is likely to be around 2.0 per cent while the annual growth rate of employment potential will be about 3.5 per cent, leading to the conclusion that he target of fuller employment in rural areas is well within the reach.

Role of industrial sector

The strategy of employment generation in the industrial sector lies in the growth of certain strategic sectors like fertilizers, pesticides and essential agricultural machinery which are most crucial for agricultural development. A substantial increase is likely to be made in the production of wage goods and essentials of mass consumption like sugar, vegetables, oils, drugs, textiles, paper and common consumer durables. It will go on creating additional employment opportunities in large, medium and small industries.

The large scale industries being highly capital intensive have limited potential to absorb the increasing labour force It is the small scale industries and rural non-farm sector which will go a long way in increasing employment opportunities for the masses. Nevertheless, the expansion of large industries creates substantial downstream employment through 'forward linkages'. Forward linkage effects encourage investment and employment generation in subsequent stages of production. During the Plan, the development of electronics and automotive has been assigned a leading role which will generate employment to a great extent in the services and ancillary sector.

The development of infrastructure contributes a lot in the process of development. If infrastructure is not built up, then the whole of the economy is likely to crumble down. During the current Plan, the bulk of employment has to be generated by developing infrastructure through the expansion of labour intensive techniques for housing, urban amenities, construction activities, transportation, communication and rural infrastructure.

Investment pattern in 7th plan

Indian economy on the eve of the Seventh Plan was in a fairly balanced state During the Sixth Plan, the aggregate growth target of 5.2 per cent was achieved. Regarding sectoral growth rates, agriculture and services sector showed good performance while industrial sector lagged far behind. The growth rate of agriculture came to 4.3 per cent against a target of 3.8 per cent. On the contrary, the industrial sector could achieve a meagre growth rate of 3.7 per cent against the target of 6.9 per cent. The target could not be achieved due to low performance in basic industries like steel, fertilisers and cement, and in textiles. Interestingly, the services sector realised the growth rate of 6.6 per cent instead of the target of 5.5 per cent. Thus the economy as a whole performed satisfactorily and at the onset of the Seventh Plan it was on a threshold for launching ambitious targets of investment, income, output and employment generation.

The current Plan proposes a total investment of Rs. 3,22,366 crores for the entire Plan period. This time the private sector has got a bigger slice than that of the public sector. The share of the private sector in total investment will be of the order of Rs. 1,68,148 crores (52 per cent). This huge investment in both the sectors of the economy will have a carry over effect in employment generation.

The data in Table 1 documents the break up of the investment by broad Heads for Public and Private Sectors. Regarding public sector investment, mining, quarrying and manufacturing taken together account for 27.5 per cent of the investment while the share of electricity is likely to be 20.8 per cent. It will be followed by agriculture and allied activities, 17.9 per cent. The share of railways will be 8.0 per cent, followed by others, transport—5.8 per cent, and communications accounting for a meagre 4.1 per cent.

For the private sector, mining, quarrying and manufacturing from the bulk of the investment, 37.0 per cent. It will be followed by other services which accounts for 32.0 per cent; then comes agriculture and allied activities whose share will be 20.2 per cent. After this other transport—10.7 per cent and electricity sharing almost a negligible 0.2 per cent.

The pattern of total investment (public & private) shows that mining, quarrying and manufacturing have received 32.5 per cent of the total investment, which is followed by other services, 24.2 per cent. The share of agriculture and allied activities will be 19.1 per cent, electricity—10.1 per cent, others transport—8.3 per cent, railways—3.8 per cent and communications only 2.0 per cent.

Investment distribution

It is very interesting to compare the distribution of public sector investment with private sector investment. While mining, quarrying and manufacturing received the highest share in both the sectors, agriculture and allied activities also accounted for a substaintial share. In public sector, 15.9 per cent went to other services, while it was 32.0 per cent in the private sector. It implies that other services have to be carried on to a great extent in the private sector than those of in the public sector. In public sector, electricity got a substantial share of 20.8 per cent. It leads to the conclusion that generation and transmission of electricity is mainly a state subject. Similarly investment in communications was to be made only by the Public Sector further conforming to the pattern that the building of infrastrucure was the responsibility of the state.

Owing to resource constraints, in making sectoral allocation in the public sector investment, three important points have been taken into consideration. Firstly, the projects where the rates of return are higher have been preferred because quick yielding projects with a low capital intensity make it possible for scarce capital resources to be realised soon enough for reinvestment. Moreover such projects also generate more employment per resource. Secondly, it has been emphasised to increase the productivity of the existing capital stock through modernisation. Finally, due consideration has been given to a balanced growth of infrastructure sectors, productive sectors and sectors of human resource development including poverty eradication programmes. Besides these, for a sustained growth in the Eighth Plan, it has been considered vital for additional allocations for new projects in certain strategic sectors like power, coal, railways, etc.

Additional employment generation

During the Current Plan period, additional employment of the order of 40.356 million standard person year will be generated. It is evident from Table 2 that the bulk of the employment will be created in the agricultural sector which will account for 44.56 per cent of the total additional employment. Out of this, 17.27 per cent will be created in the crop sector and remaining 27.29 per cent in the non-crop sector which is going to play a key role. After this the major head of employment generation will be other services sector accounting for a share of 24.54 per cent of the total additional employment. It is likely to be followed by manufacturing—16.54 per cent, others, transport—5.87 per cent, electricity—1.16 per cent, mining and quarrying—0.85 per cent, communications—0.68 per cent and railways—0.36 per cent.

It is very interesting to compare the pattern of investment and employment generation. An investment of 19.1 per cent of total investment in agriculture and allied activities will generate employment to

Table 1

Pattern of Investment in Public and Private Sectors by Various Sectors of the Economy (at 1984-85 prices).

Sectors of the Economy	*Investment (Rs. crores)*			*Percentage of the total*		
	Public Sector	*Private Sector*	*Total*	*Public Sector*	*Private Sector*	*Total*
1	2	3	4	5	6	7
1. Agriculture and allied activities	27574	34048	61622	17.9	20 2	19.1
2. Mining, Quarrying and Manufacturing	42455	62172	104627	27.5	37 0	32.5
3. Electricity	32149	419	32568	20 8	0.2	10.1
4. Railways	12334	...	12334	8.0	...	3.8
5. Other Transport	8871	18015	26886	5.8	10.7	8.3
6. Communications	6355	...	6355	4.1	...	2 0
7. Other Services	24480	53894	77974	15.9	32.0	24.2
Total	154218	168148	322366	100.0	100.0	100.0

Source : Seventh Five Year Plan, Vol. I &II, Planning Commission, Government of India, New Delhi

Table 2

Pattern of Additional Employment in Various Sectors of the Economy

(Million standard person year)

Sectors of the Economy	*Employment at the end of 1984-85*	*Employment at the end of 1989-90*	*Additional employment generation during the period*	*Growth rate (%)*
Agriculture	96 108	114 092	17.984 (44 56)	3.49
(i) Crop Sector	58.750	65.720	6 970 (17 27)	2 26
(ii) Non-crop Sector	37.358	48.372	11.014 (27 29)	5.30
Mining and quarrying	1.153	1.494	0 341 (0.85)	5.32
Manufacturing	26.790	33.466	6 676 (16 54)	4 55
Construction	10 427	12.624	2 197 (5 44)	3.90
Electricity	1.031	1 498	0.467 (1 16)	7.76
Railways	1 544	1 688	0 144 (0 36)	1.80
Other Transport	9 440	11 810	2 370 (5.87)	4 58
Communications	0.951	1 224	0 273 (0 68)	5 18
Other Services	39 261	49 165	9 904 (24 54)	4.60
Total	186.705	227 061	40 356 (100 00)	3 99

Source Same as for Table 1.
Note. Figures in parenthesis denote percentage of the total.

the tune of 44.56 per cent of the total employment created. Similarly 24.54 per cent of the additional employment in the other services sector will be created only by an investment of 24.2 per cent of the total investment. It implies that agriculture and allied activities and other services sector are highly labour absorptive sectors because here an investment of Rs. 50,054 will be required to create an additional job. On the other hand, electricity and railways being infrastructure sectors are highly capitalistic in nature because here the investment of Rs. 7,34,894 will be required to generate one additional job.

Seventh Plan envisages a marginal shift in sectoral composition of work force and gross value added. It is considered valid that with the process of economic development a structural shift in work force and national income from primary sector to secondary sector and further to the tertiary sector takes place. The data in Table 3 shows that during the Current Plan, the pattern of investment and employment generation will have a direct bearing on structural transformation of the economy. Regarding work force, the relative proportion of primary sector will decline from 52.09 per cent to 50.91 per cent resulting in raising the share of secondary sector from 20.48 per cent to 20.96 per cent and that of tertiary sector from 27.43 per cent to 28.13 per cent. In the same manner, the proportion of primary sector in gross value added has been projected to decline from 40.33 per cent to 37.41 per cent. It will lead to increasing share of secondary sector from 22.87 per cent to 23.48 per cent and that of tertiary sector from 36.80 per cent to 39.11 per cent. Though these changes are marginal yet the trend conforms to the pattern of development.

Table 3

Structural Shift in Sectoral Composition of Work Force and Gross Value Added

(Figures in percentage)

Sectors of the Economy	Employment		Gross Value Added	
	At the end of 1984-85	At the end of 1989-90	At the end of 1984-85	At the end of 1989-90
1	2	3	4	5
I. PRIMARY SECTOR	52 09	50.91	40.33	37.41
1. Agriculture and allied activities	51.47	50 25	36 86	32.68
2. Mining & Quarrying	0 62	0.66	3.47	4.73
II. SECONDARY SECTOR	20 48	20.96	22.87	23 48
3. Manufacturing	14 35	14 74	14 66	15.03
4 Electricity	0 55	0.66	2.00	2 29
5. Construction	5 58	5 56	6 21	6.16
III. TERTIARY SECTOR	27.43	28 13	36.80	39.11
6. Transport	5 89	5.94	5 60	6.19
7 Services	21 54	22 19	31 20	32 92
Total	100 00	100 00	100.00	100 00

Source : Same as for Table 1

The economy is planned to grow at the rate of 5.0 per cent per annum while generation of additional employment has been targeted at the rate of 4.0 per cent per annum. While comparing the sectoral pattern of growth of employment and gross value added, one inconsistency emerges. The data in Table 4 reflects that in the agricultural sector, the growth rate of gross value added is lower than that of additional employment. On the contrary, in all other sectors it is well high above the growth rate of additional employment. It looks that either the creation of employment in the agricultural sector is overestimated

Table 4

Projected Sectoral Growth Rates of Employment, Gross Output and Gross Value Added

(Per cent per annum)

Sector	Employ-ment	Gross Output	Gross Value Added
Agriculture	3 5	4.0	2.50
Mining	5 3	13 0	11 7
Manufacturing	4 1	8 0	5 5
Electricity, Gas & Water Supply	7 8	12.0	7 9
Construction	3 9	4 8	4 8
Transport	4 2	8 0	7 1
Services	4 6	6.6	6 1
Total	4 0	6 6	5.0

Source : Seventh Five Year Plan Vol. I, Planning Commission, Govt of India, N Delhi

or productivity will decline or employment will be created at a lower wages rate which is not in harmony with a "Work and Productivity Oriented Plan". The situation is further aggravated by the fact that gross value added per worker in agricultural sector will decline from Rs. 7,419 in 1984-85 to Rs. 7,071 in 1989-90, while in all other sectors as a whole it will increase from Rs. 13,480 to Rs. 14,708 during the same period.

Against the low rate of gross value added than that of employment in the agricultural sector, it may be argued that the low value added probably would be due to low capital intensity (Rs. 34.3 thousand per person) in the agricultural sector. Moreover, in the rural economy which is characterised by high incidence of distinguished unemployment or under-employment, the creation of employment even at a low wage rate (Under the programmes like National Rural Employment Programme. Rural Landless Employment Gurantee Programme, etc.) will go a long way in increasing the earnings of rural masses It is evidenced by the projected decline in poverty ratio for rural persons where it will come down from 39.9 per cent at the beginning of the Plan to 28.2 per cent by the end of the Plan

Conclusion :

The preceding analysis has demonstrated that as a result of massive planned investment substantial employment will be generated in all sectors of the economy. It is heartening to note that the sectors having higher potential for labour absorption have been given priority than those which are highly capital intensive in nature. It is a commendable step in the right direction because the country is having abundant labour and scarce capital. Considerable investment has to be made in infrastructure sectors which is very essential to cope up with the pace of development. In a developing economy, investment in infrastructure is as much important as in production sectors both being complementary to each other. It has been established beyond doubt that growth oriented sector and employment-oriented sector must move in an integrated and coordinated manner for achieving rapid growth with social justice.

Land distribution, success or failure !

Dr. M. P. Mathur

Is the surplus land distribution programme a success, has it bettered the lives of the allottees ? The author attempts to answer these questions in this article. He further pleads for simplifications of allotment procedures and supply of capital and technical know-how to the allottees so as to ensure their prorgessive rehabilitation.

Land reform programme was initiated in the country immediately after Independence with a view to increasing agricultural productivity and ensuring distributive justice. The programme began with the abolition of Intermediaries as underlined in the First Five Year Plan and reform of Tenancy in the Second Plan. It was followed by the general recommendations for imposing ceiling on agricultural holdings above the minimum family requirements as stipulated in the Second and Third Five Year Plans. The next Plans critically reviewed the earlier measures and spelt out more specific provisions for lowering the ceiling levels as well as reducing the number of exemptions under the ceiling laws.

In order to enrich the knowledge about the impact of land ceiling measure, which is the most important land reform programme, capable of changing the life and conditions of the weaker section of the agricultural community, a detailed purpose-oriented field survey has been conducted in Jabalpur district of Madhya Pradesh State The empirical evidences collected and analysed serve as a useful guide to understand the prevailing bottlenecks in implementation as well as the remedial measures needed to rectify the existing maladies. A sample of one hundred households from among the allottees of surplus land was taken up for detailed probing and closer critical examination. The allottees of surplus land have been selected on a random basis.

Out of the 100 allottees selected for the interview only 75 per cent got actual possession of land during the time of survey. Thus it is clear that 25 per cent of the households who were officially declared as beneficiaries, were not in a position to derive any benefit from surplus land distribution programme. Hence, for analytical purposes, these two categories were separated into effective and ineffective allottees. In measuring the impact of the benefits of land, the households have been examined at two points of time i.e. before allotment of the surplus land (1976-77) and under the existing conditions at the time of survey (1980-81). They were further compared between the effective and ineffective allottees. Even within the allottees of land, cross sectional variations on the basis of their farm sizes have also been carried out.

Drawbacks

The inadequacy as well as ineffectiveness of the distribution machinery came into light in the course of this survey. The land distribution was neither based on a family size norm nor on the quality of land which varied from area to area or from plot to plot. The average of distributed land was 2.30 acres and it varied widely between 0.62 acres and 5 acres. 85 per cent of the allottees got only 1.90 acres of land on an average.

The survey results have shown that the distribution of surplus land to the landless agricultural labourers has provided the most basic input and created necessary conditions in which they could improve their socio-economic conditions. Their hopes and aspirations had changed along with the changes in their social and economic conditions. Land being the most important factor, given economic strength and social status, allotment of a piece of land, however, bad it might be, gave them a new lease of life and an overall improvement in their position in the rural society. This change is naturally reflected in other actions and activities of these beneficiary population. With all the weaknesses, right from the policy level to the implementation level, the programme of surplus land distribution has certainly helped a section of the landless agricultural labourers, most of whom happened to be members of Scheduled Caste, Scheduled Tribes and other weaker sections of the agrarian population.

The survey analysis clearly indicates that the distribution of plots less than one acre to landless did not help to increase sufficient employment opportunities to the family. Hence, it was found that subsidiary occupation was more compelling for those families who had less area of land. Moreover, the seasonal variation in agriculture labour demand also accentuated to look for subsidiary occupation.

Table—I : Occupational Pattern of Economically active member among the households by farm size

		Principal Occupation (in%)			*Subsidiary Occupation (in%)*		
Holding Size (Acres)	*No of working members*	*Cultivators*	*Agricultural labourers*	*Non-Agricultural workers*	*Cultivators*	*Agricultural labourers*	*Non-Agricultural workers*
0*	67		76.1	23 8			52.2
1	35	42.8	51 4	5 7	14 2	42.2	8.5
1—2	60	58 3	36 7	5 0	16 7	41 7	8.3
2—3	148	79 7	16 2	4 1	16 9	13 5	2 0
3+	42	100 0	..	..		.	..
All	352	59 6	32 7	7.7	11 3	17 0	13 1

* 'O' holding size represents for in-effective allottees.

Survey findings

A significant finding of the survey is that with the increase in the farm size, more and more family members were found to be engaged in their own farm work. This shows, given an economically viable agricultural holding, most of the family members can be gainfully employed and productivity can be substantially raised. It also shows that by providing land to the landless, many rural families can be progressively rehabilitated. Another finding of the survey is a substantial change in the occupation pattern of effective allottees from that of agricultural wage earners to owner cultivators. This was more so in the case of families holding more than 3 acres of land.

Table II

Occupational Shift among the Effective allottees before and after Distribution of Surplus Land

From/To	*Agricultural labourers*	*on-Agricultural activities*	*Unmplyed/ new work force*	*All*	*Percent*
Cultivators	128	24	58	210	73.7
Agricultural labourers	49	15		64	22.4
Non-agricultural activities	.	11	..	11	3.9
All	177	50	58	285	100.0
Percent	62.1	17 5	20.4	100.0	

A higher percentage of children in the age group of 10 to 14 years and older people above 60 years were found taking part in farm activities among the effective allottees. This was in addition to the other members of family in the working age group. The rate of female participation among the allottees was also encouraging. However, a smaller farm size did not provide gainful employment to all the members of the family throughout the year. This may be true with even 2 to 3 acres of farm size. Hence all these farmers had to look for some alternative occupation, in some cases during the off season and for many, practically throughout the year. Nevertheless, ownership of land forms the biggest social security for the family.

Another notable finding is that the increase in farm sizes showed a fast rise in the average per capita income. Moreover, a significant change in the income level was noticed in the case of households possessing land above 2 acres. In fact many of the effective allottees would increase the per capita

income by more than 50 per cent when compared to the ineffective allottees.

Table III

Average Per Capita Income before and after distribution of Surplus Land (In Rs.)

Holding Size (Acres)	*Before*	*After*	*% Change*
O	199 6	201 3	0 8
<1 . . .	160 0	207 7	29 8
1—2. .	178 5	290 0	62 5
2—3	175 8	427 3	143 1
3+	201.0	719 6	258 0
Average	182 3	355 1	94 8
Effective allottees	177 2	400 0	125.8

will only help the rural rich and not so much the rural poor. The bureaucratic hurdles, procedural delays, red tapism, legal formalities etc., have always acted against the interest of the weaker sections. There are no reasonable indications that these conditions may improve in the near future.

Social Changes

So far as social changes are concerned there has been clear indications about an overall improvement in their attitudes, aspirations and outlook. At least, among the effective allottees a new hope and confidence has been created that their conditions may improve sooner or later. This change in outlook has been noticed in every aspect and activity of the families. For instance, in the field of education they are anxious to send their children to schools. But a majority of them have not been able to do so since their economic conditions have not improved so much. The children are required to either work in their own fields or to help the family to supplement their income. Even then several families are not able to make a reasonable living at a bare minimum subsistance level

(*Contd. on page* 20)

Table IV· Indebtedness and their purpose by size of land holdings

Holding Size (Acres)	*% of Households taken loans*	*Average borrowed amount (Rs./HH)*	*Purpose for which loan was taken (% amount)*		
			Agricultural	*Domestic Purposes (food articles etc)*	*Social Activities*
O . . .	80.0	1275		54 9	45.1
<1	80.0	1200	25 0	25 0	50 0
1—2	79.6	1166	34 3	21 4	44 3
2—3	67.6	1052	52 3	19 0	28 7
3+ .	45.5	500	100 0	.	
All .	70.0	1113	30 1	31 3	300.6
Effective allottees . . .	66 7	1043	44 8	19 8	35.4

As revealed in the survey results, assets formation is also directly linked to the ownership of agricultural holdings as well as its size. Among the allottees it has been found that their farm assets have increased, but definitely in the case of households having more than one acre of land As for those households having less than one acre of land, building up of farm assets was not so attractive and also beyond their means. Of course, most of the households have acquired their assets through borrowings, and not out of savings.

Economic condition of allottees

The overall economic condition of a majority of the allottees of surplus land was not very sound In many of the cases, household income was not sufficient to meet their day to day needs. As a result these families, by and large, had to depend on borrowings not only for agricultural purposes but also for family consumption. The survey has revealed that the Government credit to them had been practically negligible except for some loan from the cooperative societies. Their obvious source, therefore, had been the money lenders. This may eventually deprive the cultivators, the ownership of their land through benami transactions and later on they may even become bonded labourers. Thus it is very clear that allottment of land without providing necessary agricultural inputs and credit facilities

Table V

Percent Amount Borrowed by Sources and Holding Sizes

Holding Size (Acres)	*Money lenders*	*Land-lords*	*Friends & Relatives*	*Co-operative Societies*
0	90.2	7 8	2.0	.
<1 .	78.1	14 6	6 3	1 0
1—2	77 9	12 9	7.1	2.1
2—3	76.1	7.6	11.8	4.6
3+	68 0		.	32.0
All .	81.0	9 2	6 7	3 1
Effective Allottees	76.5	9 9	9 0	4 6

Poverty eradication needs a concerted effort

Dr. K. M. George

'The Seventh Five Year Plan goal of bringing down those living below the poverty line to less than 10 per cent by 1994-95, necessitates that the war on poverty must be fought on many fronts simultaneously.' To achieve this goal IRDP is the main strategy launched by the Government. The author who makes a comprehensive study of the problem of poverty eradication feels that it has to be a concerted and co-ordinated effort of different bodies at All India, State and District levels. The author identifies certain areas in programme implementation which require further strengthening. These include elimination of ineligibles, provision of working capital, realistic insurance coverage, after-care support and avoidance of the menace of middlemen

THE INTEGRATED RURAL DEVELOPMENT PROGRAMME (IRDP) is one of the recent strategies launched by the Government of India to contain the incidence of rural poverty. It aims at helping the assisted families to cross the poverty line on a lasting basis by providing them with productive assets and gainful employment. The assets are provided through financial assistance made available through Bank loan and Government subsidy. The amount of subsidy varies for different categories of beneficiaries. While Scheduled Castes and tribal beneficiaries get 50 per cent subsidy, marginal farmers, agricultural labourers and artisans get 33.3 per cent. Small farmers are entitled to get 25 per cent subsidy. An individual household can generally get a subsidy upto Rs. 3,000. The maximum subsidy amount in the case of DPAP areas, is Rs. 4,000 and in tribal areas it is Rs. 5,000. The remaining portion of the cost of the project is financed as term loan by banks. Under IRDP it is stipulated that atleast 30 per cent of the assisted families should come from the socially backward categories. Besides, to ensure larger involvement of women in the developmental process, the programme envisaged that atleast 30 per cent of the beneficiaries should be women

DRDA's job

For implementation of IRDP, the generally accepted basic administrative unit is DRDA—DRDA is usually headed by the District Collector Its Governing Body includes Members of Parliament, Members of State Legislative Assemblies, representatives of Bank and weaker sections of the society. Planning and implementation of IRDP is the job of DRDA. In practice it is at the block level that the plans are prepared and implemented. The impact of the programme is also assessed by the block level officials At the state level there is a coordination committee to assist DRDA in planning, implementation and monitoring of the programme and to ensure linkages and co-ordination. However, at the All India level, the Department of Rural Development ensures the

effective implementation of the programme. There is a Central Committee for IRDP and such other anti-poverty programmes, headed by the Secretary, Rural Development. Based upon the feed back received from the field, this committee brings about policy changes for better programme formulation and implementation.

Implementation

The initial step is the household survey taken up with a view to identifying the eligible families, that is the families with an annual income of less than Rs. 4,800. The list of such families is to be approved by the Village Council. In order to select the very poor, those families with a maximum annual income of Rs. 3,500 are first selected. After identifying the prospective beneficiaries a host of administrative procedures like the finalisation of the activities to be financed, sanction and disbursal of loan by banks, acquisition of assets and post-asset acquisition follow up including provision of linkages follow. In order to straighten many a kink at different levels, there are different committees like, the high level committee at all India level, State level coordination committees, District consultative committees and block level consultative committees. To cap it up there are beneficiaries' committees at the block level to ensure their involvement in the programme implementation. In many places, beneficiary organisations are being promoted with a view to increasing their bargaining power in an otherwise unequal society.

Review

It was expected that during 1986-87 the programme would assist 35 lacs of families Of this 20 lacs of families were to be from the old group of beneficiaries of the Sixth Plan period and 15 lacs were to be new families The progress achieved is given in the following table.

Physical and Financial Progress Till January 1987

Parameter	Annual target 1986-87	Achievement till Jan, 87	%age of achievement
Financial Progress			
1. Allocation (Central & State) (Rs in crores)	543 83	375 81	69 10
2 Release of Central share (Rs in crores)	277.31	278 76	100.54
3. Credit (Rs. in crores)	870 12	621 21	71 39
Physical Progress			
1 Families to be assisted (Nos in lakhs)	35 00	25 25	72 16
(i) Percentage of SC/ST families to total assisted	30 00	41 12	
(ii) Percentage of women families to total assisted	30.00	13 13	.

The programme implementation has been, by and large, satisfactory in terms of physical and financial indicators. However, the quality of the programme decides its real strength and weakness. Statewise progress is given in appendix.

Tasks before IRDP

As the cutting edge level in the implementation of the IRDP is the block, the strengthening of block level machinery assumes paramount importance. Equally important are the monitoring cells at the State capitals. Since the Government of India provides 50 per cent assistance for this, the State Governments have to take advantage of this in an otherwise tight outlay situation. The decision to provide a joint BDO to all those blocks which have one lac population and a minimum of 10 village level workers and five extension officers is a step in the right direction. Regardless of these norms, the North-East and tribal ITDP areas will have a joint BDO due to the disadvantageous nature and other handicaps of these areas. They may also have additional hands to strengthen the grass roots level administration.

As a matter of fact, the poorest of the poor, were given assistance in about 70 per cent of the cases. The remaining 30 per cent are the victims of leakages got into the system at the time of identification of the beneficiaries. This needs rectification. About 40 per cent of the families which were assisted under IRDP did not report any indebtedness but 25 per cent had some overdues amounting to an average of Rs. 700. Wherever overdues were reported, the loan amount might include an additional component to settle the old dues also. In most of the cases the assets were available for physical verification. However, in as many as 70 per cent cases the assets were of inferior quality which adversely affect the income generation. As the targets were to be achieved many a time in short notice, assets were acquired in duress.

Delivery system

The delivery system has been far from satisfactory for most of the beneficiaries Both forward and backward linkages were the victims of target setting, in the absence of any realistic planning. This has adversely affected the generation of adequate incremental income. At the national level, about 54 per cent of the beneficiaries had crossed the poverty line of Rs. 3,500, and 12 per cent the revised poverty line of Rs. 6,400.

The areas which require further strengthening include the elimination of ineligibles, provision of working capital, extended repayment period depending upon the life and income generating capacity of the assets, realistic insurance coverage, meticulous aftercare support and the avoidance of the menace of middlemen. The Government of India's recent steps for improving the programme implementation are laudable. They include the setting up of internal audit cells at the State level, delegation of power to approve and implement plans from state level to the DRDA and encouraging the cultivation of nursery for saplings by small and marginal farmers as an input for social forestry.

Delay in the adjustment of subsidy is done away with and no beneficiary will be charged any interest due to this. The banks have fixed two days in a month for loan disbursement under IRDP. However, processing of applications and sanction will continue, as usual, throughout the month. The two day formula is yet to facilitate the proper disbursement of assets.

Financial support

During the year 1985-86, some 30 lacs families were to be assisted with a credit support of nearly Rs. 730 crores. Upon December 1986, around 30 lacs families had received a sum of Rs. 528 crores Statewise the target achievement in terms of financial support was maximum in Tripura, Kerala, HP and Punjab. However, it was quite dismal for Orissa and Rajasthan.

The smooth flow of credit from the banking sector, by and large, decides the effectiveness of the programme implementation. To ensure this at the apex level close liaison is maintained among RBI, NABARD, Finance Ministry and Department of Rural Development. For co-ordination with banks there is a well developed system. There is a high level committee on credit support for IRDP at the national level. This includes representatives of RBI, NABARD, Banks, State Governments, Planning Commission, Banking and Insurance Divisions of the Finance Ministry. It is an inter-face forum between implementing agencies and the banks. At the State level, there is a co-ordination committee (SLCC) to examine the policy issues relating to the flow of credit for the programme. The District Consultative Committee (DCC) approves the annual action plans. and discusses various issues relating to the implementation of IRDP and other Rural Development Programmes. The block level consultative committees are also being constituted in order to bring about better co-ordination between banks and Govt. officials at the grassroots level.

The Regional Unit Cost Committees are set up to review and recommend realistic unit costs based upon the local situation. Despite this, there are no revisions on a regular and on going basis. Though credit and credit-cum-recovery camps are to be organised, only the former is in vogue, leaving recovery as the major casuality. Loan pass books containing the details such as date of sanction, amount sanctioned, subsidy, rate of interest, amount due under each instalment, due dates of repayment and the like, are not issued and updated by many bank branches This is one of the major lapses in IRDP implementation.

The Seventh Five Year Plan goal of bringing down the number of people living below the poverty line to less than 10 per cent by 1994-95, necessitates that the war on poverty must be fought on many fronts simultaneously. As pointed out in the Plan documents, the attack on rural poverty must be around individual households who are to be provided with income generating assets and skill endowment as well as productive employment through public works. Though there are many grey areas in the implementation of IRDP, one must admit that it has already created some ripples in the rural areas and a new ray of hope is visible for the millions of rural poor

Rs. 2.18 crore for watershed management of Bihar rivers

The Union Government has sanctioned Rs. 2.18 crore, for the current financial year, for integrated watershed management in the catchment areas of three flood prone rivers in Bihar—the Sone, Ajoy and Punpun—under the Centrally sponsored scheme. Under the scheme Rs 82 5 lakh will be spent on Sone, Rs. 63 lakh on Ajoy and Rs. 72.5 lakh on Punpun. While the State Agriculture Department is to get Rs. 124 lakh, the Forest Department will receive the rest of Rs. 94 lakh out of the total amount sanctioned which represents 50 per cent grant and 50 per cent loan.

ANNEXURE

PHYSICAL & FINANCIAL PROGRESS UNDER IRDP DURING 1986-87 TILL JANUARY, 1987 (PROVISIONAL)

(Rs. in lakhs)

Sl. No	Name of the States/UTs	Total allocation	Central share	Central Release as on 2-3-1987	State Release
(1)	(2)	(3)	(4)	(5)	(6)
	States				
1.	Andhra Pradesh	3739.77	1869.89	1869.78	1867.17
2	Assam	1256 59	628.30	628 30	422 94@ @
3	Bihar	7097 72	3548 86	3382.51	1577.81@
4	Gujarat	1979 67	989.84	989.74	989 72
5	Haryana	691.18	345.59	445.59	292.79*
6	Himachal Pradesh	437.76	218.88	218 88	112.61
7	Jammu & Kashmir	702 03	351 02	348.19	275 67
8	Karnataka	2173.82	1086 91	1086.90	885.05*
9.	Kerala	1477.97	738.89	1043.98	337.60*
10	Madhya Pradesh	5073 61	2536 80	2536.89	2053 27*
11.	Maharashtra	3699 47	1849 73	1712 53	1672 49
12.	Manipur	154 83	77 41	77.41	34 24
13	Meghalaya	208.17	104 08	81 54	189 90
14	Nagaland	263 27	131 64	126 00	65 82
15	Orissa	2972 04	1486 02	1237 73	1023.80@
16	Punjab	795 36	397 68	812 49	397 68
17	Rajasthan	2523 54	1261 77	1185 63	626 32*
18	Sikkim	86 13	43 06	21 05	19.00
19	Tamil Nadu	3793 53	1896 76	2097 56	1897.56
20	Tripura	146 75	73 38	142.74	73.38
21.	Uttar Pradesh	10029 66	5014 83	5014 83	4754.37
22	West Bengal	4001 01	2000 51	1935.15	1271 88
	Union Territories				
23	Andaman & Nicobar Islands	45 15	45 15	45 15	—
24	Arunachal Pradesh	367 15	367 15	243 52	-
25	Chandigarh	60 73	60 73	4 00	-
26	Dadra & Nagar Haveli	23 79	23 79	23 79	—
27	Delhi	100 58	100 58	100 58	—
28	Goa, Daman & Diu	193 36	193 36	75 52	--
29	Lakshadweep	30 49	30 49	11 09	-
30	Mizoram	180 68	180 68	284 08	—
31	Pondicherry	76 75	76 75	76.75	--
	All India	54382 56	27730 62	27880 50	20841.07

ANNEXURE

Sl. No.	Name of the States/UTs	Utilisation	Annual target (Nos.)	Total families assisted (Nos.)	SC (Nos.)	ST (Nos.)
(1)	(2)	(7)	(8)	(9)	(10)	(11)
	States					
1.	Andhra Pradesh	3426.27	241500	183520	73623	20310
2	Assam	667 01+	70500	37490	2837	10159
3	Bihar	3310 89@	460000	361015	91811	5683
4	Gujarat	1693 77	122500	109317	14085	26370
5.	Haryana	571 31*	54000	33946	13088	—
6	Himachal Pradesh	513 58	31100	30204	14977	3060
7	Jammu & Kashmir	399 65	38500	18833	1528	—
8.	Karnataka	1621.22*	145500	107081	26949	2991
9.	Kerala	1774.58	128500	120982	35512	3410
10	Madhya Pradesh	3374 56	335000	258741	50256	61749
11.	Maharashtra	2833 72	220000	160141	41135	22321
12.	Manipur	215 43	8800	9891	40	5997
13.	Meghalaya	179 07	8800	4504	—	4318
14	Nagaland	77 05	13500	2534	—	25 34
15	Orissa	1476.65*	234000	114476	26048	28405
16.	Punjab	670 07	71500	49278	25433	—
17.	Rajasthan	1034 43	155900	79412	25318	13426
18.	Sikkim	27 16	3700	2272	115	554
19.	Tamil Nadu	3024 06	246500	185379	80914	3288
20	Tripura	216 32	15000	8305	1277	2662
21	Uttar Pradesh	7828 40	632000	477773	228391	1761
22.	West Bengal	2038 29	189500	140583	42668	7901
	Union Territories					
23	Andaman & Nicobar Island	5 84**	1800	1881	—	218
24.	Arunachal Pradesh	151 90	16600	5909	--	5909
25.	Chandigarh	1 42*	2500	131	31	—
26	Dadra & Nagar Haveli	9 22	1000	700	61	542
27	Delhi	64 45	5100	3301	607	—
28	Goa, Daman & Diu	104 59	9300	8047	285	43
29	Lakshadweep	9 27s	1300	230	—	176@
30.	Mizoram	223 58	12100	6979	—	6979
31	Pondicherry	37 12*	4000	2649	780	1*
	All India	37580 88	3500000	2525504	797769	240774

* Information till December, 1986
@ Information till November, 1986
s Information till October, 1986
+Information till September, 19 86
**Information till August, 1986
@@Information till July, 1986
(—) Nil
NR Not Reported

ANNEXURE

Sl. No.	Name of the States/UTs	Women (Nos.)	Terms Credit disbursed			Progress Till month
			By Coop. Banks	By Comml. Banks	Total	
(1)	(2)	(12)	(13)	(14)	(15)	(16)
	States					
1.	Andhra Prádesh	28578	N.R.	N.R.	5025.60	Jan. 87
2	Assam	2978+	N R.	N.R.	791.43—	Jan. 87
3	Bihar	15815@	278 27@	5819 90@	6098.17+	Jan. 87
4	Gujarat	20517	181 64	2237.96	2419 60	Jan. 87
5.	Haryana	9130@	12 79*	937 92	950.71*	Jan. 87
6	Himachal Pradesh	4238	0 36	684 29	684.65	Jan. 87
7.	Jammu & Kashmir	744	81 99	455.97	537 96	Jan. 87
8.	Karnataka	15235*	145 09*	2668 60*	2813 67*	Jan 87
9	Kerala	37464	377 87*	2456.96*	3359 04	Jan. 87
10.	Madhya Pradesh	11019	646 01*	5697.63*	7179 05	Jan 87
11.	Maharashtra	28380	721.71	4320.61	5042 32	Jan. 87
12	Manipur	1575	—	93 29	93.29	Jan 87
13	Meghalaya	1821	—	—	—	Jan 87
14	Nagaland	316	—	—	—	Dec. 86
15.	Orissa	6288*	299 93*	1481 86*	1781.79*	Jan. 87
16	Punjab	7031	5 93	1394.56	1399 59	Jan. 87
17.	Rajasthan	2858*	226 44*	1227 73*	1454 17	Jan. 87
18	Sikkim	345	—	93 54	93 54	Jan 87
19	Tamil Nadu	63266	1454 67	3882.78	5337 45	Jan. 87
20	Tripura	378	23 56	359 15	382 71	Jan 87
21.	Uttar Pradesh	45247	1810 00	11218 03	13028 03	Jan 87
22	West Bengal	21639	78 00	3314 99	3392 99	Jan. 87
	Union Territories					
23	Andaman & Nicobar Islands	148+	N R	N R.	41 60+	Jan. 87
24	Arunachal Pradesh	947	0 42@	0 39@	0 81@	Jan. 87
25.	Chandigarh	32	—	4.62*	4.62*	Jan. 87
26.	Dadra & Nagar Haveli	220	0.32	17.67	17.99	Jan. 87
27.	Delhi	387	—	134.45	134 45	Jan. 87
28.	Goa, Daman & Diu	2866	N R.	N.R.	N.R.	Jan. 87
29.	Lakshadweep	51	—	5 74	5.74	Jan. 87
30.	Mizoram	1437	—	—	—	Jan. 87
31.	Pondicherry	581*	—	50 00*	50.00*	Jan. 87
	All India	331531	6345 00	48558.64	62120 99	

Why do we need watershed development

H. N. Ranganathan & Dr. KNR Sastry

In the watershed. the author says, we can have a food water budgeting and thereby make a proper use of this available land resource. Development of watershed means treating all the lands in it, irrespective of ownership, to ensure maximum moisture and soil conservation to get maximum returns per unit of land over a cycle of coop season.

DROUGHT, A MONSTER, CAN BE COMBATED through Watershed Development approach. The forests that have disappeared, the wells that have gone dry, the local fruits which have become things of the past, the droughts which have become more common and the ecological-balance which has been disrupted so often are finding remedies in Watershed Development. In fact, it provides succour from drought and ecological imbalance.

What is watershed

A Watershed is an area having common drainage. This means that the rain water-falling on an area within a ridge line will flow out of this area through a single point. There is no prescribed size for the Watershed but it depends upon topography of the area and the drainage point. Since this area gets delineated on scientific basis, in which topo-sheets and drainage maps are used, it does not correspond to any village boundaries. Further. it will encompass-fields belonging to different fertility capabilities. It is also necessary to note that, the fields within a Watershed are inter-dependent in terms of their productivity capabilities like different organs of a living body connected with veins and nerves.

Thus, if we know clearly the total rainfall and its distribution, we can estimate the total quantity of harvestable water in the Watershed.

In the Watershed we know the soil type, slope and depth of the soil, vegetative cover, grass cover, etc., which slow, down the flow of water. Hence based on the harvestable rain water in the area and the characteristics of the Watershed, water budgeting can be done for each piece of land starting from the ridge down to the valley. This means, amount of water that is entering a particular piece of land, the maximum that can be retained in the soil profile and that inevitably flow out of it as surplus can be fairly estimated. After all, any land-based resource development requires water. If a watershed is well managed for the water, it is best managed for all the other resources. Thus, in the Watershed we can have a good water budgeting and thereby make a proper use of the available land resources. Therefore, Watershed is used as a unit of development.

Components of watershed

Any given watershed almost necessarily covers non-arable lands held by public, community and private ownerships. Therefore, the treatments need to be decided based on these variables. This mainly calls for the integrated efforts of forest, agriculture, horticulture sectors at the initial stages which can prepare proper ground for implementing other deve-

lopmental programmes like—live-stock, rural|cottage industry. These three sectors will try to secure the active services of many like departments to endure proper supply of seeds, fertilizers, plant protection chemicals, equipments etc. Such an intensified integrated effort will not yield expected results unless the target group of farmers do not actively participate in the programme.

Through the treatment of non-arable lands (like forest, Gomal and community lands, Nalas etc.) and also through alternate land use (depending on land capability) the programme envisages to produce maximum possible fodder, fuel, fiber, timber and fruits in the Watershed looking into the needs of the area.

Based on the land capability classification in the Watershed and taking into account the moisture conservation practices a land on which single crop was grown, now being recommended for double cropping or inter cropping instead of mono cropping by motivating farmers to use improved seeds, fertilizers etc Thus, the proposed land use pattern will ensure better productivity and higher income to the farmers.

What is development ?

Logically planning and treatment of the Watershed should start from the ridge and culminate at the valley portion.

If the land is less slopy and with less rainfall, a tree like Casuarina with less canopy will be sufficient for moisture conservation. However, if the lands are more slopy and there is more rainfall, we may have to plant trees like Cashew which have good canopy cover and hence can prevent erosion of soil and water run-off between two contour trenches.

Thus, we can observe that though treatment of non-arable land should be done by the Forest unit, they have to consult Agricultural Unit about the treatment. Between two trenches it is essential to establish some vegetation so that the soil is not lost due to run-off resulting in the filling up of contour trenches and thereby hampering the efforts to prevent run-off. Vegetations like grass, Legumes like style or fibre crops like Agave can be thought of for this area.

If the fodder problem is acute in a Watershed area community land can be used for growing fodder.

The contour trenches will be dug and planted with trees of fodder varieties and in between trenches grasses of legumes which are nutritious can be grown.

By this way we can rejuvenate the existing grass lands for better productivity. This enclosure can be shifted to other portions by turn in the ensuing years Even here, contour furrows are to be opened at appropriate intervals to conserve moisture. The above practices in the forest and the community land will ensure that the moisture is conserved maximum in situ, and only excess water let out slowly.

The natural nala is to be jointly treated both by the Forest and Agriculture units so that it will not erode further due to receipt of the excess water. The Forest unit will put vegetation on the mouth, base and banks of the Nala to prevent further erosion, and the Agriculture unit, in consultation with the Forest unit, construct other structure like gully checks, gully revetments etc. looking into the flow after taking into account moisture conservation already achieved in the catchment.

Since the aim of the Watershed is to use the land according to its capability it is necessary to persuade the farmers not to cultivate interior lands for annual crops but to grow tree crops.

If the farmer agrees to grow (for fuel, fodder) forest species, then the planting can be resorted to in the contour trenches.

If the farmer wants an annual income and cannot wait for the returns once in 10 years, then he can plant horticultural species.

The species selected both under Forestry and Horticulture should be suitable to the local area and with good productivity. In the case of horticulture, grafted seedlings are to be preferred

If the farmers are not willing to completely shift over to tree crops, the farmers can be advised to go in for Agro-Horticulture or Agro-Silvyculture systems.

The first priority is for moisture conservation in situ. The farmers should be encouraged to take all agricultural operations on contours It will be necessary to advise the farmers to change from the use of wooden plough to iron plough to facilitate contour ploughing. The farmers cannot do contour ploughing with wooden ploughs because the soil does not get fully pulverised The contour ploughing and sowing will ensure that each line will act as a bund and check the velocity of water before it enters the next land.

If the land is more slopy a small section bund along the contour, using a bund former, can be formed in the case of red soils. Dead furrow at every 3 metres can also be recommended. The other recommendations for soil, for moisture conservation in situ are ridges and furrow and smoothening etc. In the case of black soils the recommendations are compartment bunding, zincy terracing, scooping etc., which will ensure the retention of moisture in the soil.

After adopting in situ moisture conservation practices the bunds will check the velocity and the excess water will be lead through the grassed outlets and allowed to enter the waterways which are fully protected with vegetation and drop structures.

The bunds needs to be fully protected by planting grasses and trees which are to be provided to the farmers.

If the moisture loss is more by wind it is necessary to provide wind breaks.

Thus, the development of a Watershed means treating all the lands in a Watershed, irrespective of the ownership, to ensure maximum moisture and soil conservation to support appropriate land based enterprise which can yield maximum returns per unit of land over a cycle of crop season. The development has both short-run and long-run perspective suited to all categories of farmers. Thus, all the farmers in the Watershed—without exception—are the participants and beneficiaries of the programme.

Why it is needed ?

Since each field is an integral part of the entire Watershed, the individual efforts to develop any particular field either will result in limited and myopic benefits or will become costlier. It may also lead to social and other problems. Therefore, a project approach to treat an area will enable to get the benefits of interaction effect due to interplay of integrated efforts of different sectors on all the fields which have inter-relationships.

The rain water will be properly controlled, collected and conveyed right from the ridge portion of the Watershed. At the ridge portion where it will be mostly non-arable lands maximum possible water will be retained to raise fodder, fuel, fruit and even timber trees These outputs will be made available to local communities at most reasonable terms The inevitable excess water will be safely lead through diversion channel to the natural nalas where it will be again harvested for protective irrigation by constructing farm ponds, percolation tanks and for both watering plants and ground water discharge to help farmers around nalabund and in the lower reaches.

The rain water in arable lands also will be conserved in situ through various conservation measures like contour or graded bunds, small section bunds, fall ploughing, early tillage, dead furrows, deep and shallow rooted crop mix in red soils and Zincy terracing, comfort bunding, scooping etc in black soils. The excess water will be surplused out of each field through waste-weirs to waterways

The water that has entered the waterway as mentioned earlier will be stored in a farm pond for subsequent use for protective irrigation. Forest unit or the horticulture unit may request the farmer to grow some fruit trees on the peripheri of the farm ponds and grass on the banks of the farm ponds. The excess run-off from this farm pond will then enter the natural nallah which is fully strengthened through vegetation and masonry structures, like gully checks, gully plugging etc Even after these moisture conservation efforts still if there is water available in the nala, the water conservation structures like nala bunding, percolation tanks, minor irrigation tanks etc. can be thought of. Thus, we can recognise how each of the item for moisture conservation practices will be dependent on previous treatments. These moisture conservation practices right from the ridge to the valley portion, will finally ensure higher moisture regime in the soil, for a given rainfall, when compared to what it used to be before the treatment. In other words, the level of moisture holding capacity as well as the depth of the moisture regime will increase. □□□

(*Contd. from page* 11)

The allotment of land had certainly enhanced the social position of the allottees in the rural society. This is evident from the fact that they have now got associated with village panchayats, gram sabhas and different political organisations. This also may be partly because of the competition to remain organised in order to discourage the rural vested interest from trying to take back the land.

The survey result has revealed that about half of the allottees still maintained smooth working relationship with their former landlords while the rest could not maintain the earlier relationship This may, perhaps, be due to the fact that some landlords had lost only very little land and that too of poor quality while some others lost more areas as well as better land. The outlook of the landlords to the land distribution programme was also assumed to be directly dependent on as to how much each one of them had lost.

A large percentage of the allottees were of the view that their socio-economic conditions with regard to income, employment, education, housing and social prestige have improved as direct result of land distribution. About 90 per cent of the households considered that land reform programme was good for the overall development of the weaker section and better agricultural productivity. However, the fact remains that the landlords have lost some economic assets, may be marginal in their overall property, but the landless who did not have any productive assets at all gained substantially. It is natural, therefore, that those who got more and better quality of land have gained more and those who got less land and poor quality of land gained less. But it is true that every allottee of surplus land had gained through the programme.

However, all is not well with the land distribution programme. The survey has clearly demonstrated that the allottees had suffered because of the procedural delays, judicial decisions, lack of inputs, capital and technical know-how and the overall indifference towards the comparatively weaker sections.

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Single window scheme in cooperation

G. V. B. Sharma & Md Fayajuddin

Farmers have to approach various agencies and financial institutions for different types of loans. To ease this difficulty and also to facilitate the farmers to receive all types of loans at one place within easy access, "the single window system" has been introduced. The author here examines the concept of this system with particular reference to Andhra Pradesh where he points out, the Cooperative Societies Act has been amended for the introduction of the scheme.

THE VILLAGE IS CONSIDERED to be the heart of India and over 80 per cent of the population dwells in villages. The overall advancement of India, as envisaged by Jawaharlal Nehru, thus appears to lie only in the upliftment of the rural population. Therefore, the rural development assumed much importance. As a result, the Government of India introduced several rural development programmes such as the Integrated Rural Development Programme (IRDP), National Rural Employment Programme (NREP), and Rural Landless Employment Guarantee Programme (RLEGP), etc. Most of these programmes, though started in good faith, did not give the expected fruitful results for various reasons. To cite an example, the NREP has received a setback since no active involvement of people is there. This scheme is not also given much attention by the State Governments and local bodies. Thereby, a major portion of funds earmarked for the promotion of employment remained unspent. In the year 1983-84 the Government provided Rs. 538 crore. As against this, only Rs. 394 crore were spent. Therefore, the unspent amount of Rs. 144 crores worked out to be around 30 per cent. Even in subsequent years this backlog has not been made up. This scheme did not yield the expected results because of the organisational difficulties and lack of proper planning

Why co-operatives ?

India being predominantly an agricultural country the welfare of farmers is of prime importance By floating agricultural loans, supply of seeds, fertilizers and providing suitable market for the crop produced, the farmers can be motivated for deriving high yields, rendering the country self-sufficient. For this purpose the co-operative system has come into existence. In the original set up of extending co-operation to the farmers many steps were involved. To start with, NABARD would allocate funds to State Co-operative Bank which would in turn provide funds to the District Co-operative Bank, enroute to the Central Co-operative Bank at Taluka level and finally to the concerned co-operative societies. This chain of allocation of funds at various levels proved to be not only time consuming but also puts the farmers to much inconvenience. Fund may not reach the farmers in time and thus the purpose of taking loans may be defeated. Further, involvement of many agencies also tax the farmer in many respects due to various constraints prevalent. In view of this farmer's associations all over the country agitated for the introduction of two tier system. After a decade's

struggle the dream of the farmers in having two-tier system—funds coming from NABARD direct to district co-operative bank and from there to the concerned societies—has come true. The "HAZARI COMMISSION" also recommended this system. At present the farmers have to approach various agencies and financial institutions for different types of loans. In order to ease this difficulty and also to facilitate the farmer to receive all types of loans at one place within easy access, the concept of "Single Window" has been thought of by the Government of India. To this extent Mr. V. P. Singh, the then Union Finance Minister, declared at an 'open house' meeting that the single window concept should be extended to cover all aspects of financing. The borrowers will have to send their applications only to one institution and to deal with the lead institution as soon as it is notified to them.

Single window

The Government of Andhra Pradesh also considered the question of the Co-operative system not producing the targetted results and proposed a remedial measure in 1983 in the form of "Single Window" Scheme, with the concurrence of Government of India. As a result, the A.P. Co-operative Societies Act, 1964 has been amended to pave way for the introduction of single window system in Andhra Pradesh.

Objective

In the present system of getting long term loans such as agricultural appliances, etc., the farmers may have to approach the Agricultural Development Bank (ADB). For any medium or short term loan such as fertilizers, seeds, electric pumpsets etc, the district co-operative banks were vested with the powers of floating loans. There are about 6,695 primary agricultural co-operative societies (PACS) in the entire State which will be pruned to 4,499 on the basis of viability. The main objective of the introduction of single window is to have co-ordination between various agencies of co-operation so that the farmer may be able to approach only one agency for any type of co-operation he deserves. With the introduction of single window system the ADBs and central co-operative Banks will be merged at the state level. The co-operative bank at the Taluk level will be merged with the district co-operative Bank At the village level some of the primary agricultural societies will be clubbed while, some of them will stand abolished. The previous set up of having about 5 to 6 co-operative societies in a mandal would now be modified under single window so as to contain not more than two co-operative societies with an understanding that all the members of the defunct societies are also the members of the new societies formed due to the merger

Hitherto there are about 25 types of Co-operative societies in the state which did not come under the purview of the Registrar of Co-operative societies. They are Toddy Tappers Cooperative Societies, Fishermen's Cooperative societies etc. Under the proposed single window system A.P. State Cooperative Development Corporation covers all these societies.

According to Sri N. Yathiraja Rao, Hon'ble Minister for Co-operation, the interest and penal interest to the tune of Rs. 50 crores has been waived for prompt repayments upto June 30, 1987, and a rebate of 5.5 per cent in the interest is also proposed. The target set for 1987-88 under cooperative agricultural lending is Rs. 200 crores for Kharif and Rs. 100 crores for Rabi seasons under short term loans. Of these Rs. 93 crores has already been distributed. During 1986-87 the target and the actual loans distributed were Rs. 200 crores and Rs. 153.70 crores respectively, The backlog is said to be due to not attaining the targets of minimum recovery percentage (40 per cent recovery) by eight district co-operative banks according to the norms of NABARD.

The targets set in other fields of lending are as under :—

Oil Seed Development Programme	.	Rs. 25 Crores
Long-term loans	..	Rs. 83 Crores

The long-term credit target for the Seventh Plan period was of the order of Rs. 450 crores.

The Andhra Pradesh Legislative Assembly approved single window scheme in the month of March, 1987 and steps for its active implementation are on way. The Hon'ble Chief Minister Shri N. T. Rama Rao will be dedicating the scheme to the people in principle on 27th August, 1987. Thus, Andhra Pradesh becomes the first state to acceed to the single window.

Since, only four months have elapsed, the single window system is still in an infant stage to study its functioning and the effect However, the short-term agricultural loans being governed by the single window system, a test case of a village "TALLA KHAMMAMPAD" has been taken for the field study.

The findings of the field study of the said village are as under.

Thalla Khammampad has a primary Agricultural Co-operative Society. The particulars of its population, the members of the society, the number of borrowers and the total amount of loans floated are shown in the table below :

TABLE—I

Name of the village	Population	Particulars of the society			Amount of loan floated
		Total No. of members	No. of loanees	No. of non-borrowers	
1	2	3	4	5	6
THALLA KAHMMAMPAD	4,550	390	265	125	Rs 3,00,000

The P.A.C.S. of the Talla Khammampad consists of 390 primary members of whom there will be one President, one Vice-President and nine Directors. The P.A.C.S. has to be a registered society with a minimum of 11 members by registering themselves as members. The registration fee is Rs. 11|- (10+1).

The elected office bearer shall be in office for a term of three years. The society also contains a Co-operative department's representative designated as the Secretary of the society.

The infra structure of the Society is ·

1. Secretary's quarter.
2. Presidents chamber.
3. Office room &
4. A Godown of capacity 100 metric tonnes.

The society suggests agricultural loans on various crops in two stages. (1) loan in cash, (2) loan in the form of fertilisers. The particulars of the cash and the monitary value of fertilizer loans for various crops are indicated in the table given below :

The loan is actually disbursed to the farmer based on the pass-book and the identification he possesses in two stages i.e. in cash and in the form of pay order to any fertilizer dealer, if the farmer has not already purchased the fertilizers. In case the farmer already purchased the fertilizers he has to produce the receipt thereof to draw the amount of loan under fertilizers. In this case the bank however, did not bother to verify the genuinity of the receipt and allows the benefit of doubt to the loanee.

Realisation of loans

The due dates for repayment of loans given to the farmers are (1) Februrary of every year for Kharif Crop ; (2) May of every year for Rabi Crop. For repayment of any loan the period of one year is given to the farmer i.e. he will be given time upto the next crop and the amount of loan is supposed to be cleared during the next crop. In case the farmer did not repay the loan then the bank gets a decree for attachment of property mortgaged in favour of the bank. The loanee will however, be given a fortnights time before the property is actually attached. 80 to 85 per cent of the loans floated are generally re-payed. Since the prompt repayment of the loan would not only reduce the interest to be paid but also gives him eligibility for taking further loans, the number of defaulters appears to be low.

TABLE—II

Sl. No	Type of Cultivation	Name of the crop	Amount of loan		Remarks
			Cash in Rs	Fertilizers Worth in Rs.	
1	2	3	4	5	6
1.	Well fed	For any Crop	1125/-	375/-	
2.	Rain fed	Ground-nut	900/-	500/-	
3.	-do-	Paddy	1050/-	350/-	
4.	-do-	Jawar	350/-	150/-	
5.	-do-	Castor	525/-	175/-	
6	-do-	Bajra	175/-	125/-	
7	-do-	Chilly	525/-	175/-	

The loanee has to enter into an agreement to the extent that the land being cultivated and any other movable or immovable property in his name be mortgaged with the society. He has also to provide evidence to the satisfaction of the authorities concerned regarding the repaying capacity. The loan applications are put before the executive committee of the society and after due consideration the list of eligible members along with the loans sought for and the amount recommended will be sent to the central co-operative bank. After scrutiny of the supervisor of the bank, the loan may be granted

Medium term loans

Loans for the purchase of electric pump sets, digging of wells and purchase of tractors etc., are covered under the medium term loans. This can be repayed in 30 equal instalments including the interest. These loans are floated at the rate of Rs. 10,000|- for wells and Rs. 6,000|- for electric pump sets etc.

(Contd. on page 30)

Issues for U.P.'S Eighth Five Year Plan

B. M. Joshi

The article is both a review of UP's performance during the course of successive 5 year plans and a study of the issues for its 8th Five Year Plan keeping in view the overall plan objectives and priorities set out by the Planning Commission. The State, says the author, is backward in most respects and needs a big push to bring it on the path of rapid growth. Popular participation, the author feels, is a must for the success of any plan. To this end, he advocates for a decentralised planning process and making grass-roots level bodies-village Panchayats to Zilla Parishads—responsible for not only Planning but also for implementation and monitoring.

THE PROCESS OF FORMULATION OF EIGHTH FIVE YEAR PLAN (1990-1995) has already started at the national level. The Planning Commission had circulated two papers. One relates to "major issues for Eighth Plan" and second relates to "issues and studies relating to formulation of Eighth Plan." The success of national plans in realising the plan objectives depends to a great extent on the effectiveness and quality of the planning process at the State Level as the State plans account for half of the total plan outlay.

It is, therefore, high time that the State should also initiate some action in this direction and try to identify some of the major issues which are more relevant for the State keeping in view the overall plan objectives and priorities set out by the Planning Commission.

An attempt has been made, in this paper, to discuss some of the issues involved in the process of plan formulation keeping in view the performance in the previous plans. A few suggestions have also been offered in this regard for the consideration of the planners and policy makers.

The State Plan, being an integral part of the national plan, has to be in conformity with national plan and hence has to take into consideration the broad national objectives and priorities. The Planning Commission has laid down, in its paper, seven basic objectives to be attained by 2000 A.D. These are—(a) Poverty should be virtually abolished in the sense that the proportion of people below the poverty line should be brought down below 5%; (b) This implies that conditions of near full employment should be attained; (c) Indian industry should, in general, have graduated out of the existing phase of high cost and low productivity. India should be reckoned among the major modern industrial nations, and in atleast a selected number of industries, the country should be in the front rank with a high degree of technological self reliance; (d) Health for all should be achieved; (e) Provision of universal elementary

primary education to all children up to the age of 14 ; (f) Removal of structural deficiencies in backward areas so that there is a significant reduction in disparities in the levels of development of different regions; and (g) The country must have attained self-reliance in terms of external economic relations. The State Plan has been fixing its objectives and priorities accordingly. But apart from the overall plan objectives and priorities, the State will also be guided by its requirements as well as past performance in fixing its own objectives and priorities. It will, therefore, be fruitful to critically review the past performance before coming to major issues

Rate of growth

We had envisaged a higher growth rate than the national average so that the gap between the per capita State G D.P. and per capita national income is reduced. Our growth rate has always been less than the national average except in 6th plan period where it was slightly higher. The same is the case with the per capita income. Though there are encouraging trends in recent years, the result of continuous lower growth rates in earlier plans is that the gap has not shown any declining tendency. The per capita S.D P. in U P. was Rs. 453 in 1960-61 at 1970-71 prices while the per capita national income was 564. The ratio was 1.24 The per capita S.D P. marginally moved up to 486 while the per capita national income increased to 633 and the ratio increased to 1.3. In 1980-81 the figures for U P. and national level are Rs. 519 and Rs 698 The ratio comes to 1.34. Now according to quick estimates of Directorate of Economics and Statistics the per capita S.D P is Rs. 587 for U P and the per capita national income is Rs. 798 and ratio is 1 35 for 1985-86. Secondly the growth rate for the first two years of the Seventh Plan comes to around 3 per cent against a targeted growth rate of 6 per cent The Prevailing severe drought situation will result in a bigger shortfall in growth of farm output and thus will affect the VII Plan growth targets further.

Demographic situation

This is directly related to the growth in population The growth of population has been significantly higher in U.P compared to country in recent years. The percentage increase in population during 1971-81 was 25 49 in U.P. as compared to 25 at the national level though in 1961-71 period. the rate of acceleration in population was less than the national average.

The rural population in the State increased by 1.8 per cent per annum during 1971-81, the corresponding figure for the country being 1.75 per cent only The growth figure for urban population in U.P. and India are 4.9 per cent and 3.8 per cent respectively.

The infant mortality rate, birth and the death rates are quite high in the State compared to the country. The infant morality rate, which has marginally declined, is still too high to make one feel confident of survival of their children.

This demographic situation clearly reflects on the performance of our health and family planning programmes. The Seventh Five Year Plan clearly mentions that the national averages in the family planning programmes are substantially lowered because of the relative poor performance in the States of U.P., Bihar and Rajasthan. U.P. has a couple protection ratio of 16.7 per cent against the national average of 32 per cent. This type of demographic situation has obvious implications for the growth of per capita income, removal of poverty and reduction of unemployment.

Structural changes

The economy of the State has largely remained an agricultural economy. Though there are signs of diversification of economy during the last decade but the extent of diversification is lower in U.P. The increase in population has put added pressure on the agrarian economy. The size of the holding has been affected by it. About 70 per cent of the total holdings are less than one hectare. This agrarian structure has its serious repercussions in terms of agricultural production and use of modern technology. These land holders, because of uneconomic size, can not create a private source of irrigation and can not have mechanised agriculture. Hence the problem of releasing the pressure of people on the land is very crucial. This problem is connected with the question of diversification of the economy as well as creating more employment opportunity outside agriculture.

In agriculture sector, we have reached an optimum level in wheat so far as the area, not wheat cultivation, is concerned. But the vital question of productivity remains. There are large scale variations in productivity in eastern and western region as well as between western region and neighbouring States of Punjab and Haryana. There is also enough scope with regard to rice production in terms of area as well as productivity. But the most disturbing areas are oil seeds and pulses. No break through has been achieved both in terms of area as well as productivity. U P. being the major food grain producing State, its performance affects the national average also apart from its own growth rate.

The State has been following the strategy of decentralized industrial growth with promotion to appropriate type of small scale units in rural and backward areas. Incentives have also been provided for backward areas. Many projects have also been taken up in the State. But the relative position of the State has more or less remained unchanged. The pattern of industrialization has not much impact on the

sectoral diversification. Agriculture continues to be the major contributor to S.D.P. as well as employer of work force. The employment share of non-primary sector in the total work force continues to be low.

Further the migration from rural areas though increasing is to a great extent unrelated to pace of industrialization. The urban growth rate for Uttar Pradesh was 4.9 % during 1971-81 which was much higher than the national growth rate of 3.8%. But this migration is poverty induced migration because of low productive agriculture and less opportunities in rural areas in the primary sector. Most of these migrants have been absorbed in the tertiary sector rather than the secondary sector.

Regional disparities

The question of regional disparities has been highlighted since the Third Five Year Plan. Inspite of regional orientation given to the planning process by dividing the State into five economic regions, the sectoral approach continued to dominate the planning in U P. Hence it had practically no impact on the reduction of disparities. The decentralized planning concept introduced in U.P. since 1981-83 did give some weightage to backwardness but apart from inherent limitations of the scheme, the amount is so meagre that it can not have major dent. A few area specific schemes taken here and there are not going to solve the problem of large scale regional disparities.

Rural urban disparity

Connected with it is the question of rural and urban disparity There are wide disparities in the availability of facilities between the rural and urban areas. The minimum needs programme (MNP) was introduced during the Fifth Five Year Plan with a view to providing certain basic facilities in the rural areas. But inspite of this, the disparities are alarming in the field of education, health, drinking water, rural roads, rural electrification. Majority of rural population do not get the basic health facilities and most of the child births are even today attended by untrained nurses. This has assumed a serious political problem apart from the migration from rural to urabn areas creating urban slums and putting severe pressure on basic civic services.

Economic infrastructure

One of the major areas of concern for planners and policy makers is the economic infrastructure which basically includes irrigation, power, roads and credit facilities. Inspite of planners concern and high priority, the development of infrastructure is not going on desired lines and many lacunae have come to light during the years which though highlighted in successive plans, have continued to persist. Though the State lags behind the national average in almost all the facilities yet full benefits of huge investments made over the years are not being derived because of low utilization of capacities created specially in power and irrigation sectors. Infrastructure planning is marked by lack of integrated approach apart from inadequate attention not only to project formulation but also its implementation. It is marked by heavy time and cost overruns. Further the public sector undertakings responsible for provision of different utilities have displayed gross inefficiency in management.

Social services

Like physical capital, human capital also plays an equally important role in the Process of economic development. The position of the State vis-a-vis national average is not at all satisfactory. The plans are giving a low priority to this sector in terms of percentage share in total plan outlay. The per capita expenditure is lowest in the country. This clearly shows that the level of investment in human capital has been far from adequate in the previous plans in U P. It has been clearly reflected in the physical quality of life index (PQLI) which is quite low in U.P.

Poverty and unemployment

The drive against poverty has had some impact on the change in the situation but compared to other states the situation is not satisfactory. As per the published reports, the persons living below poverty line (Rural only) was 49.79% in 1977-78 which has gone down to 45.2% in 1983-84 which indicates only 44% decline. Compared to other States, this decline is the lowest in the country. The situation on the employment front is also not satisfactory. There was a backlog of 20.77 lakh unemployed persons at the beginning of the Seventh Plan and it was projected that 51.24 lakh will be added during the current plan period. But against this only 45 lakh persons will get employment It means that Eighth Plan will open with a back log of 27 lakh people.

Resource mobilization

U.P's economy needs a big push to put it on the path of rapid growth. It will require a higher level of investment than has been possible in the past. The States per capita plan outlay has always been less than the per capita outlays in other States. On the other hand, the contribution of Central assistance has always been higher in the funding of State's Plans. This clearly shows that the States own contribution in the plan effort has been comparatively less The Central share will always be limited as it is based on Gadgil formula. Further the performance of the State in the resource mobilization during the current plan has been far from the desired level and the State may find it more difficult to mobilize the resources during the last two years of Seventh Plan and it may end up with the shortfall in the targeted

Seventh Plan outlay. Hence the State will have to boost up its own resource mobilization efforts in case it has to attain a higher rate of growth.

Thus it is clear that U.P. has to go a long way before it improves its relative position in the national economy. Side by side, it has also to gear its economy to meet the new challenges of the future. It has also to keep before it the national plan objectives and priorities while formulating the Eighth Five Year Plan. In the light of above discussions, some of the major issues that emerge are briefly discussed below :—

(a) The demographic situation, discussed above, leads one to conclude that if effective measures are not taken, the population situation is going to be explosive and the alround implications of such a high population pressure are too obvious and need no elaboration. Hence one of the top priority area for the planners and policy makers is to control the population increase. This not only requires effective family planning measures but also more extensive general medical and health Programme. The goal should be to bring down the birth rate in the State over the next plan period. This assumes special urgency in view of the high infant mortality as well as high crude death rate in U.P.

(b) In order to achieve a higher rate of growth, a much larger level of investment is required than has been possible in the past. Hence there can be no escape from a higher mobilization of resources. Some hard decisions in terms of some taxation measures will have to be taken. Apart from this, another important area is the contribution of public sector undertakings. The past performance of these undertakings has been very discouraging. The working of these public sector undertakings will have to be improved so that these also contribute in the development process of the State rather than become a burden on the State.

The Central Government must be made to realise that the State's efforts need to be supplemented on a much larger scale than in the past and there should be greater flow of resources.

Apart from the objective of higher investment in public Sector, a favourable climate has to be created to encourage private investment in different sectors of the economy which have also been on the lower side of the economy.

(c) Infrastructure being one of the basic input in the production process should and will continue to get highest priority in terms of plan outlay. The quantitative expansion of facilities will not be enough. It should be accompanied by qualitative improvement also. The regional disparities in the provision of these facilities as well as rural-urban disparity will have to be looked into in the planning of infrastructure facility. But one of the thrust areas should be the optimum utilization of capacities already created in the sector.

(d) Though a very high priority is given to poverty alleviation and both employment generation programmes at the national as well as at the State level, yet the progress in this direction has not been satisfactory. Apart from some of the structural deficiencies, the basic reason is the ineffective delivery mechanism. This mechanism needs to be more efficient and effective. There is also a need to think in terms of maintenance of assets created under the employment generation schemes.

(e) Special efforts need to be directed to improve the physical quality of life. The State is lagging behind in investment in human capital and the availability of basic minimum facilities like education, health, drinking water, etc. Our aim should be to attain at least the minimum national norms in these services, by Eighth Plan end. This will help in the improvement in the physical quality of the life of the people and thereby raise the human resource potential of the State which will ultimately help in the alround development of the State.

(f) Agriculture will continue to dominate the economy in the coming years hence all efforts should be made to maintain the tempo of agricultural development. Special attention need to be paid to the oil seeds and pulses development. But the potential of industrial development needs to be fully utilised. This will help in diversification as well as reduction of pressure on land and also result in generation of employment. This requires a three pronged strategy. First, the State should undertake direct investment in industry. Secondly, the infrastructure bottlenecks should be removed and an appropriate policy should be evolved to improve the investment climate in the State to attract private capital investment and lastly efforts should be made to secure larger number of central sector projects for the State.

(g) Finally the success of the plan depends on the popular participation. The popular participation can be achieved through the democratic bodies from village panchayats to Zila Parishads. These bodies provide a forceful instrument of planning at the grass-root level. Hence there is need for decentralization of planning process and making these bodies responsible for not only planning but also for implementation and monitoring of plans. This will require extensive delegation of power and authority and also making these bodies strong in terms of financial resources. The decentralization process started in Sixth Plan needs further strengthening by involving the democratically elected panchayati raj bodies in the development process. It is through the "democratic decentralization" that the realistic people's plan can be prepared and implemented at the grass-roots level. □□□

Decentralise planning to speed up rural uplift

Dr. Durgadas Roy

Why decentralise planning ? Because it will help speed the process of removing poverty, says the author. According to a high level Committee's findings, 'the centralised bureaucracy alone cannot be agent for the removal of poverty and unemployment in the villages'. The village poor themselves, their representatives and voluntary bodies need to be actively associated in this process so that there is 'realignment of political power in favour of the disadvantaged groups and people for their social and economic development'. The only instrument through which it can be done is the Panchayati Raj System which, the author feels, must be strengthened. Because, according to him, the rural development programme over the last three decades has been a victim of bureaucratic neglect, defaults and distortions. Therefore, people's participation in the rural development at the grass-roots level should be given more serious attention.

REACHING THE RURAL POOR is not simple and straightforward process. Planners and breaucrats have little idea about the conditions in which the poor live. An Asian Development Bank Document recently brought out this fact when it stated that "very little is known about the socio-economic mileu in which the poor live and operate. Sometimes planners make assumption on rural life which are not always tenable."

Present approach must change

Experience indicates that the planning and implementation of rural development calls for a substantial measure of decentralisation involving the strengthening of local government and other development institutions The adjustments needed vary significantly from country to country. Unless the functional aspects of rural development projects are completely delegated to some level of regional and|or local government level problems typically will arise with regard to overlapping functions of central and local government, departments. At the same time, we are increasingly aware that the approach, as it is being practised in India, is not upto expectation.

Need for correct strategy

The Seventh Plan lays considerable emphasis on decentralised planning. It is but natural that a sub-

ject like decentralised planning raises a host of issues and problems on the mechanics and management of planning functions. There is definitely a gap between what planners have visualised as local level planning, and what is being actually being practised in the field. Undoubtedly, the task of operationalising any planning concept at the grass-roots level is not an easy task. Perhaps it is not easy to state what is desirable, but the crucial issue is to work out a correct methodology of translating it into viable administrative decisions. The field of local level planning, in particular, which encompasses the strategy and tasks of block level development, will require altogether different administrative and other postures as well as a greater degree of competence—not merely technocratic competence, but also other competence, such as for associating and mobilising the local masses for planning and development tasks.

To overcome poverty

The basic directions in which the developing countries are moving are clear. All of them including India have a preference for bottom-up development planning, as against wholly centralised approaches adopted so far. There is also a growing awareness among them that development plans must reflect a realistic concern for eradication of poverty. In keeping with these aims and objectives "a small area focussed" approach is emerging in many countries including India. It has been pointed that the most complex problems of development strategy are not technical production questions but institutional issue of distribution and equity. It has been a public policy approach and recognised that the production infrastructure and welfare activities of the State at present do not benefit the poor, though they claim to do so. The removal of property has to be a part of the total process of rural development.

In India, in the Sixth Five-Year Plan, the monitoring process has been confined, more or less, to watching the physical and financial progress in terms of money spent and physioial coverage acheived. Evaluation Studies, on the other hand, were post facto in nature and were not of much help in applying correctives on a continuous basis. The Seventh Five Year Plan states that, "the whole machinery and system for monitoring and concurrent evaluation will be strengthened in the Seventh Plan A Central Scheme will be started for the establishment of a Computerised District Rural Information System (DRIS) in each district with the ultimate objectives of providing a data base for planning, selection of beneficiaries and schemes and monitoring their performance. A high Lovel Committee has been set up to review the administrative arrangement for rural development and poverty alleviation programme with a view to developing appopriate structural mechanism to ensure that they are planned and implemented in an effective and integrated manner."

The High Level Committee headed by G. V. K. Rao has submitted its Report to the Planning Commission. The Report is bound to become a major work of reference on the above subject of not just administrative decentralisation but decentralisation in general. The Committee has taken a political economy approach and recognised that the centralised bureaucracy alone cannot be the agent for the removal of poverty and unemployment in the villages. The village poor themselves, their representatives and voluntry bodies need to be actively associated in the process. This participation by the villagers in the institutions and systems which govern their lives is a basic human right and also essential for realignment of political power in favour of disadvantaged groups and for social and economic development. In fact, according to the Committee, the district plan "should encompass the total activity in the district"; plan and non-plan, a conventional distinction has no place in district planning and "should vanish".

Panchayati Raj only solution

It is the pious wish of the government that democratic decentralisation, and the resultant Panchayati Raj, would end all the problems since people's representatives would directly tackle their own problems and solve them. However, Panchayati Raj divided villages between warring factions, sometimes drawn along party lines. The infighting was so vigourous that development was relegated to the background. Whenever development occurred, it was cornered by powerful and influential members of the panchayat and their relations and friends, and never reached the lowest strata of society. It is observed that planners and bureaucrat administrators are not concerned about social reality in the villages. While they feel that such knowledge is an essential input for outside planning experts, they do not need any orientation as they know everything about village life since they belong to the same region. This is obviously a wrong perception. As experiences have shown that panchayati raj system failed, with rare exceptions, to develop any local dedicated leadership.

It is true that India has been experimenting with rural development programme through the bureaucracy for over three decades, and every programme has revealed a familiar pattern of bureaucratic neglect, defaults and distortions. The recurrence of such lapses leads one to believe that the bureaucracy is incapable of correcting its weaknesses. The Plan strategy itself, whatever it may be, needs to be reviewed from time to time and the people's participation in the rural development process at the grassroots level and needs should be given more serious attention. The prevalent strategies of development whether it is centralised or decentralised have failed to harness the inherent strength of rural society while its weaknesses have received continual reinforcement through the combined pressure of development and politics.

(*Contd. on page* 32)

BOOK REVIEW

Gopinath Bardoloi

Builders of Modern India : Gopinath Bardoloi by Birendra Kumar Bhattacharyya; Publications Division; August 1986; Pages 109; Price Rs. 13.00

The freedom movement in India saw the evolution of a large number of leaders. No matter where they lived and moved, they transcended the divisive barriers of caste, religion and regionalism. By and large they were a band of selfless people, motivated to serve the nation without expecting any hazards for themselves in return. They symbolised the real national spirit.

Gopinath Bardoloi (1890-1950) is a well known name in India's political history. As the torch bearer of Gandhiji in Assam in the 30s and 40s. he was a key figure during the crucial days of transfer of power. For, he had a pivotal role in mobilising public opinion against the proposal to group Assam and Bengal under the cabinet mission scheme. Thus he foiled the Muslim League's clever attempt to include Assam in the erstwhile East Pakistan.

Bardoloi was a self-made leader. His personality was many sided. Besides politics he was a brilliant student of history. He also had a deep interest in music, arts, sports, gardening, cooking, fishing and hunting. He was very fond of travel as well. By virtue of his deep knowledge of Assam's history, he became the principal spokesman of Assamese aspirations in national politics during the critical days of partition. His deep interest in comparative religions sprang from his desire to unite different religious communities into a nation. Comparison was his greatest attribute. He was a humanist above all Bardoloi was an accomplished and enlightened administrator. He distinguished himself as the Prime Minister of Assam both before and after independence. Where others had failed, he succeeded. For example, he achieved the rare feat of winning the trust of all the disparate ethnic groups in the then undivided Assam. It is he who realised the first High Court and University in the north-eastern region at Gauhati in 1948.

The author of this biography is a renowned litterateur of Assam. Going through the book, the unacquainted reader gets a quick insight into Gopinath Bardoloi's life and times. A readable narrative.

S M Kumar

Hardiker

Builders of Modern India, Dr. N. S. Hardiker by V. S. Narayan Rao, Published by the Publications Division, New Delhi, pp. 289 Price : Rs. 22.

This volume is a recent addition to the "Builders of Modern India" series which, against all odds, the Publications Division has managed to perpetuate, albeit by fits and starts.

Born and brought up in a family which had to face many a tribulation at the hands of fortune, N. S. Hardiker had managed to become a Dr. of medicine by education in the U.S.A. Even there he had very hard times before returning to India, where he threw, all that was his into the struggle for freedom, in a spirit of dedication and sacrifice that was infused in him by the ways and actions of the national stalwarts like Tilak, Lajpat Rai and Gandhiji.

Just in the foot-prints of his aforesaid mentors, Dr. Hardiker was a man of action He had earlier associated himself with the Swadeshi movement and on return to India Sewa Dal became his practical field in the service of the Mother-land. Reluctant to be rewarded for what he contributed as a true patriot and fighter for freedom it was with great difficulty that he came round to be a member of parliament and Governor of Bihar. His tremendous sense of duty and responsibility stood him in good stead and he acquitted himself creditably.

The author, through his knowledgeable competence has done more than mere justice to the life, work and personality of Dr. Hardiker. The volume is highly readable and is expected to impress a large readership because it has something solid to say about a life of rare altruism that was as much a part and parcel of freedom struggle as any other.

R. N. Rahi

Fast Agricultural Growth

The State and Rural Economic Transformation by G. K. Chadha, Sage publications, New Delhi, 1986; pages 368; Rs. 195

Amidst recent studies on rural development, also published by Sage Publications, which showed negative aspect of rural transformation, this study by G. K. Chadha is positive and quite refreshing. Sure it is that the locale is so much important. Ramashray Roy's study in Bihar is far different from Chadha's study on Punjab. So researchers are warned not to apply the results of particular studies to general.

Chadha examines the transformation that has taken place in the state of Punjab between 1950—85. These were the years of introduction and spread of the 'green revolution' in the grannary of India. He looks more to the agricultural transformation in Punjab, rather than the whole gamut of rural. He does not for example go deep into dealing with the problem of housing, or human settlements, and things like education and health. It was exhilarating to see that he has not burdened himself with the so many special programmes in rural areas like IRDP, and others, or for that matter, the dairy industry in the 'white revolution'. He has confined himself within the boundary of the subject matter. That shows that he is a proved researcher. The tools he has used are also indicative of a mature writer, and a researcher.

The book is written with empirical facts. Some of the prevailing conclusions are examined and refuted on the basis of field data. The book is rigourously written, and is one of the finest work I have come across for review. For that the ICSSR is to be congratulated.

Of all the states in India, Punjab witnessed the fastest agricultural growth consequent to the introduction of new seed fertiliser irrigation package. Public investment in irrigation and power as also roads have given the back stopping to the farmers to achieve higher production potential. But all this was made possible because of the high level of research that has gone into in developing wheat and rice varieties. Punjab story so far was confined to wheat, but Chadha extends this to cover rice as well. It is however, a lamenting fact that pulses production has gone down as a result of expansion in wheat and rice. There it is the failure of research, rather than to do any thing with the farmers.

Chadha says every section of agriculturist is better off now than before. The effects of green revolution have percolated to the lower strata. The condition of the labourers has improved, with the real wage rates going up. The expanding agriculture has reduced poverty from Punjab in the rural areas. Mechanisation has now been taken up. That too has not been detrimental to the labourers in terms of real wage rates. There is a strong linkage effect between agricultural growth and expansion of rural employment. Despite the huge migrant labourers in Punjab, the terms for the local labourers have not been adverse. It only supplements the other activities. The small farmers are supplementing their incomes from the growing market centres and the share of non farm employment is increasing, with also higher wage rates there. Chadha feels that the Government's policy of declaring support prices in advance has led to tremendous growth in agriculture and also in integrating the markets in Punjab. May be, the author might now want to study the periodical markets in Punjab. A striking feature is that more than 80 per cent of market arrivals are within the month's period from harvesting. The Punjab farmers are taking three crops. Crop intensity has increased. The early maturing varieties help a lot in using the farms and their irrigation more effectively.

The author divides the study into nine chapters. Chapter 1 is Introduction. The author takes two distinct periods for his study 1950-51 to 1965-66 and 1966-67 onwards. The first phase completed the gestation period for the modernisation of Punjab. The land reforms and consolidation of holdings created the necessary conditions for the success of the green revolution. Not only wage differences, but the social distances are on the whole vanishing in Punjab. What is striking is the fact of no particular inter district variations. That shows that the economy of Punjab is closely integrated. There is spatial integration too. The semi urbanised rural pattern is striking. The locale of many rural activities has shifted to urban centres. The rural economic structure is examined in chapter 2, Rural workers constitute nearly three-quarters of the total work force in Punjab. There is strong indication of rising capitalist agriculture in Punjab. The number of agricultural labourers for every cultivator has increased three times from 1961—81. Dairy is practised by the small farmers, adding to their employment and incomes. Chapter 3 examines the infrastructure for agricultural development. The number of tube wells energised during the period rose nearly seventy fold. Cooperatives came to the help of the farmers. There is 100 per cent presence of the cooperative societies in Punjab.

The production structure of agriculture is examined in Chapter 4. The commercial orientation of agriculture is brought out forcefully. The new agricultural technology is both bio-chemical and mechanised innovations. Then the author comes to the production performance of agriculture. He examines farm size and productivity. The inverse relationship has disappeared over time. In Chapter 6, the author examines the aspect of marketable surplus. The author then examines the assets structure of farmers with different size groups. The various land reform measures are then analysed. The percentage of area cultivated by owners is as high as 80.7 in 1975. There was an increase in self-cultivation after the wheat revolution. He holds the view that inequalities have reduced. The landless and the poor are seen in Chapter 8. Agricultural landless labourers are mainly scheduled caste households. The total employment situation for the landless has improved on the whole. Poverty line has been crossed. The other aspect that he examines is the consumption pattern in Chapter 9. He warns against the rising alchoholism in Punjab. The last Chapter 10 captures understanding the change in rural Punjab. This Chapter sums up the earlier observations. The book has rich citations and an Index.

The book, addressed to the specialists, is exceptionally well written. For the researchers it provides lot of insights for the success of the Punjab model of development. This reviewer is sure that agricultural economists will find this book very helpful. The production quality is also good.

—S. M. SHAH

(*Contd. from page* 23)

the eligibility criteria for the said loans is that the loanee must possess a minimum of 2-1|2 acres land and must also be able to produce ownership, no encumbrance from the Revenue Officials. The village under our study did not have loanees for these types of loans.

Conclusion

As the single window system came into being only three months back with the elected non-officials, its performance can not be assessed totally. However, our conclusions broadly indicate the usefulness of the single window system, based on field study.

From the above study it appears that the single window system being the choice of the farmers themselves would benefit their development, if implemented in its true perspective. This system is an easy going system from the farmers point of view since he can approach the society only instead of going round a number of agencies for different types of loans. This also enables the availability of the consolidated accounts of the loan amounts of a particular loanee at one place, since all the loans are disbursed through a single agency. Therefore, from the book-keeping point of view the system appears to be better.

In view of the past experiences regarding the failure of the rural development programmes, it is desirable to implement the single window system with more commitment and a fool proof bureaucracy.

Our study of TALLA KHAMMAMPAHAD P.A.C.S. indicated that the response of farmers for taking loans through a single agency for all purposes is quite encouraging.

Therefore, this scheme when implemented with proper zeal and the commitment required would certainly result in the long cherished Rural Development.

Thus the object of "GAREEBI HATAO" professed since the times of late Smt. Indira Gandhi, to-date would be achieved.

(*Contd. from page* 29)

Strengthen it!

Panchayati Raj in the present form can be greatly strengthened and its role be made more dynamic if the relationship between the panchayat as an institution of the village people and the government staff at the district and block levels is clarified. The panchayats must see their role as being more dynamically developmental and government staff must view the panchayats as a means of getting the people to accept and do the thing the village leaders and the government feels to be in best interests of the people and the nation. Given the importance of the district leadership, both official and non-official, in an integrated rural development programme and accepting the key role of the Zilla Parishad in the district. it logically follows that the chief district executive officer should, at the district level, play the same role as the development commissioner at the State level, functioning under the overall guidance and direction of the Zilla Parishad. He should be an officer of adequate seniority, highly competent and dynamic. Since it is within the district that all rural development programme takes place, it is essential that the chief district executive officer devotes his full time to coordinating all development programmes within the district and government leadership to the functioning of all the different agencies of government and the Zilla Parishad. He alone can assure an integrated approach to rural development at the block or grass-root levels in its entirety.

Sugar production may Touch a New High

As a result of the new Sugar Policy announced in December, 1986, sugar production this year is expected to be over 84 lakh tonnes exceeding the earlier record level of 1981-82 season. Sugar production was 70 lakh tonnes in 1985-86 and 61 lakh tonnes in 1984-85. Cane prices payable to the growers this year would be in the region of about Rs. 2000 crores as against about Rs. 1700 crores paid in 1981-82 season, which was the year of record production.

Sugarcane arrears has also been much lower than 1981-82, the year of record production in the past. This was due to good response received from the State Governments and the industry.

The Consumer Protection Act had been brought into force and the rules framed under it has been notified. Central Consumer Protection Council had also been constituted. The States have been advised to set-up State Councils and Redressal Forums at the earliest.

RESERVED FOR READERS

'THE SIXTH MIRACLE'—MAKER

I refer to D. H. Pai Panandikar's article "The Sixth Miracle" in 15 August, 1987 issue of Yojana. Pai Panandikar is rather famous for his weird logic and weird similies in his articles which are regularly featured in the national papers. Now that one of his articles has been published even in the mouth-piece of the Planning Commission (the Yojana), it is high time he was contested. His almost every single sentence, assertion or assumption can be faulted in facts or logic. But where to start? Since he has, contrary to normal practice, given some statistics, let us start with that. He asserted that our agricultural commodity export could exceed Rs. 35,000 crores per year (?). Assuming that 20 per cent of gross agricultural product is exported (a wishful thinking), it will mean India's agricultural commodity production of Rs. 35,000×5=Rs. 1,75,000 crores or $ 135 billion (at Rs. 13 per dollar). India's gross Agricultural product (in 1970-71 prices) was about Rs. 34,000 (Economic Survey of Govt. of India 1986-87). Wherefrom will the investment come? Incidentally, total Seventh Plan outlay for Agriculture is Rs. 10,574 crores (Page 27, 7th Five Year Plan Vol. I). Further, India's current G.D.P. is less than $ 180 billion. Some sooth-saying or miracle-making. The purpose of sooth-saying has been revealed a little later where corporate sector involvement in agriculture has been recommended. Corporate sector in agriculture will be no different from Zamindars or Feudal lords of yester-years. The corporate sector will face the same problems which the Zamindars and Feudal lords faced—how to keep the labour working long and hard for frugal living? Agricultural work is very hard and literally back-breaking and the motivation for work can only be sustained by brutal application of force or by giving a vested interest in the land to the Labourers. The corporate sector will like the Government to ensure:

(a) Labour stays or the land.

(b) Works hard with small wages.

(c) Labour shows no tendency to organise themselves and ask for better living wages or improved quality of life and

(d) If the labour shows any tendency to benefit by his labour or claim a share of the profit, they must be ruthlessly controlled.

So Panandikar's recommendation will involve much bigger law and order machinery subordinates to corporate interests in rural India. Of course, after that nobody should complain when the ecology gets further degraded in the pursuit of profit by corporate sector and they must have freedom to move away when the aree becomes barren.

2. Agricultural exports eh? Obviously Secy. Gen. of FICCI has not heard of commodity—Cartels or Exchange Rates. Once India gets into agricultural exports what will be India's exchange rate? Couple of hundreds Rupees will then buy one dollar and not just Rs. 13 or so as of now. I wonder did he check the trend of India's export earnings in constant dollars?

3. In this article and in all his writings the general theme is: Private Corporate Sector is more efficient than Public Sector. 7th Five Year Plan page 32 gives some revealing facts which should open the eyes of the lovers of Private Corporate Sector:

4. In agriculture this ratio is very good; that is because private corporate sector has not as yet made enough inroad in agriculture. The picture of savings is also no different. As per 'Front Line' (Feb. 22—March 7, 1986) Private Corporate Sector saving in 1984-85 has been Rs. 1164 crores (i.e. 3.7 per cent of total) whereas for Public Sector it had been Rs. 2,116 crores (i.e. 6.6 per cent of total). Where is the fabled efficiency of Private Corporate Sector, Sir.

5. His examples of Japan and Korea are charming though devoid of any inner understanding. Japan has highest agricultural subsidy and protection and investment per hectare. Japanese best rice producer used about 1,400 man hours per hectare in 1968 (Potash Review No. 6|1979, AIS Bhubaneshwar 1982 February) alongwith very high degree of mechanisation and extensive usage of fertilizer and scientific and Technical manpower. I leave the calculations to Panandikarji to see whether, with all the surplus labour, India is using enough manpower in agriculture especially in view of the low mechanisation. He will find that India is not using even 3|4th of the manpower per hectare used by the Japanese farmers. As per world Development Report 1985 of World Bank, India used 34.6 kg. of plant nutrient per hectare of

Ratio of incremental GDP at factor cost to Gross Investment (Rs. crores at 1984-85 prices)

	Public Sector		Private Sector	
	Rs.	%	Rs.	%
Mining, Quarrying and Manufacturing	6641	15.64	7065	11.36
	42453		62171	
Other transport	1308	14 76	2402	13.93
	8871		18015	
Other	10050	41.05	13262	24.64
	24480		53894	
Total	17992	23.74	22729	16.95
	75806		134081	

arable land as against Japan's 412.1 kg. per hectare. Will same economists tell us why South Korean 887 won bought one dollar in 1986? How much of domestic product got tied to repayment of loans and Will same economists tell us why South Korean in South Korea?

6. Panandikar talks of 'self-sufficiency in food'. Does he know that Soviet Union with about one third the population of India and with about twice the food production, still imports food? Because, Soviet Union is committed to improvement in quality of life of their population and is not really interested in improving the profits of corporate sector by keeping the economy tied to the international market at the cost of overall growth of the country. Since space is at a premium. I shall leave other points and take those up if Shri Panandikar or anyone else from FICCI takes up the cudgels.

—A. K. Mukhopadhyaya

Poverty eradication

With the implementation of anti-poverty programmes in rural areas during the Sixth Plan, viz. IRDP, NERP, RLEUP, Tribal Sub-plan, Special Component Plan, Desert Development Programme, DPAP, Differential Rate of Interest Scheme, Programmes sponsored by Khadi & Village Industries Commission|Board, DICS and the like, on one hand and creating institutional infrastructure like DRDA, DIC, KVIC|KVIB, etc. on the other hand, for identifying the beneficiaries and preparing loan proposals to be financed by Public Sector Banks, there has been appreciable decline in the number of rural poor between 1977-78 and 1984-85 by 31 million. However, there has been only a marginal decline (three million) of urban poor. During the Seventh Plan their number is to be brought down from 50.5 million in 1984-85 to 42.2 million by the end of the 7th Plan. The Govt. has therefore very aptly formulated, from 1st September 1986, and implemented a Nationwide SELF EMPLOYMENT PROGRAMME FOR URBAN POOR (SET UP) which is expected to cover three to five lakhs poor families during the financial year 1986-87. This scheme is the appropriate blend of IRDP and SEEUY schemes current's under implementation by DRDA and DICs; in respect of terms of advances and release of subsidy. However, under this scheme there is no intermediary official agency like DRDA and DIC to perform specific functions. While this is an appreciable bold step initiated by the Government, the experience of planning and implementing IRDP and SEEUY schemes reveals that there is more urgent and greater need than before for redefining the role of banks implementing this programme. It is against this background that an attempt is made here to briefly discuss these aspects of role so as to make the programme successful and make dent on reducing urban poverty.

—A. R. Patel
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Measures for conservation of forest

With a view to conserving forests the Government has advised the States and Union Territories to consider banning of felling of trees above 1,000 metres at least for some years. They have also been advised to avoid clear felling of natural forests and, in the eventuality of such felling being necessary for restoration of crop or other silvi-culture, to restrict it to 10 hactares in the hills and 25 hactares in the plains. This was stated by Shri Z. R. Ansari, Minister of State for Environment and Forests in the Lok Sabha on November 26, 1987. He said that total area under reserve forests in the country, as reported for the year 1984-85, was 4,01,935 Sq. km.

He also said that the centre has desired the states and UTs to set apart four per cent of the forest area as protection area for wildlife sanctuaries, national parks, biosphere reserves, etc.

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Small scale sector has a long way to go !

N. Raghunathan

"The small scale sector now produces more than 5000 products and has emerged as a major supplier of a large number of mass consumption items making significant contribution in saving precious foreign exchange", says Shri Raghunathan, Development Commissioner, Small Scale Industries, Government of India. But, he points out, "the pace of growth of industries has not been even as between different states and territories. Besides, progress has not been upto expectations in realising certain objectives like rapid development of ancillary industries...... .Another matter of concern is the growing incidence of sickness in the small scale sector. Inspite of a number of measures already undertaken to prevent the incidence the problem is still defying meaningful solution. More concerted efforts are required for prevention of sickness at the incipient stage itself as well as rehabilitation of potentially viable sick units."

IT WAS THROUGH THE WISDOM AND FORESIGHT of our leaders that soon after Independence, the role of the small scale sector in the development of our economy was fully recognised and a solid foundation was laid for its accelerated growth through active policy support and creation of an institutional framework. Pandit Jawaharlal Nehru, the architect of modern India, in his report to the AICC in 1951 had clearly visualised that cottage and small scale industries are of very special importance in India If we lack capital we do not lack manpower and we must use this manpower both to add to the wealth of the country and to reduce unemployment. It is important, however, for both cottage and small scale industries to use the latest technique and to be coordinated with large scale industries.

The Industrial Policy Resolutions 1948 and 195[illegible] emphasized the social and economic potential of th[illegible] small scale sector specially with regard to the pro[illegible]blems that needed urgent solutions viz. provision o[illegible] immediate large scale employment, a more equitabl[illegible] distribution of the national income, effective mobili[illegible]sation of resources and capital and skills which migh[illegible] otherwise remain unutilised and dispersal of indus[illegible]trial activity all over the country.

It is almost 40 years now since the first Industria[illegible] Policy Resolution was adopted by the Parliament

It is time to assess the achievements vis-a-vis the objectives with which the small scale industries development programme was launched and also to redefine the role of the sector in the fast changing economic scenario.

Growth trends

Soon after the policy initiatives, the small scale sector achieved a rapid rate of growth. The number of units increased almost five times from 35,728 in 1961 to 1,78,000 in 1969, a spectacular growth in spite of heavy odds including a severe recession which virtually pushed back not only the industrial growth but also the national income. The small scale sector has, thus, from the very beginning shown an inherent strength of resilience.

The small scale sector now accounts for 35 per cent of the total value of industrial production and contributes directly about 25 per cent to the total exports of the country. This segment of industry has grown much faster than the large and medium scale industries in the recent years. Such growth is to be specially welcomed and encouraged in view of its high employment potential and its role in fostering a wide base of industrial entrepreneurship in the country.

The small scale sector now produces more than 5000 products and has emerged as a major supplier of a large number of mass consumption items making significant contribution in saving precious foreign exchange The sector has already proved its flexibility in adopting modern technologies. In the high technology area, the sector was the first to introduce electronic typewriters, electronic survey equipment, security and fire alarm system with significant value additions within a short time frame. The development of ancillaries for components and spares required by the large scale establishments shows the measure of maturity reached by this sector in manufacturing sophisticated and high precision items.

The export performance of the sector has been equally creditable. While exports of sport goods, processed tobacco, snuff, lac and many items of plastics originated exclusively from the small scale sector, it accounted for 90 per cent of readymade garments, 80 per cent of woollen garments, 74 per cent of leather and leather products and 31 per cent of engineering goods.

In a developing economy, the ability to provide new jobs with the present scarcity of capital is surely a paramount consideration. For a modern small scale unit on an average, an investment of about Rs. 7000 is required for creating one work place while in a large sector unit the investment per work place is about 8 times this amount. Another salient factor in favour of small scale sector is its adaptability to rural and semi-urban environment where infrastructure is not so developed. This special characteristic of the small scale sector is being utilised for creation of gainful employment and specially self-employment opportunities. It is interesting to note that of the additional employment provided under the DIC programme during the 6th Plan, both through small scale and artisan units, 65 per cent was in rural areas i.e. towns and villages with population upto 25,000.

Widening the entrepreneurial base is an integral part of the development process. Many of the present day small scale units, which have gone into production of sophisticated products and are on the verge of graduating into medium sector, had made a simple beginning with just a couple of machines by first generation entrepreneurs. Although the investment limit in the plant and machinery has been raised to Rs. 35 lakh to facilitate modernisation and upgradation of technology, 95 per cent of the small scale units belong to tiny sector viz, those having an investment in plant and machinery of less than Rs. 2 lakh This goes to prove that the basic objective of the programme viz creation of entrepreneurship, attracting small savings and diverting them to productive channels has been amply fulfilled.

Trends in growth of Small Scale Units

S. No.	Item	VI Plan (1980-85)		VII Plan (1985-1990)		
		1980-81	1984-85	1985-86	1986-87	1989-90 (Targets)
1	No of Units (in '000 Nos.)	874	1242	1353	1457	—
2.	Production of current prices (Rs Crores)	28,060	50,520	61,228	72,250	80,220*
3	Employment (in '000 Nos)	7100	9000	9600	10,140	11900
4	Exports at Current prices (Rs Crores)	1643	2541	2785	not available	4140*

*At 1984-85 prices.

India has evolved perhaps the most comprehensive service and consultancy infrastructure in the world catering to almost all requirements of small entrepreneurs right from selection of a line of production to marketing of the final product. Specialised agencies have been created and schemes launched for supply of essential inputs like raw-materials, credit on concessional terms, machinery on hire-purchase, provision of technical, technological marketing, management, economic consultancy and information services. The industrial estates programme in India is the biggest of its kind launched by any country in the world. India has always been willing to share its experience with other countries of the world. It has so far assisted about 50 developing countries in planning and development of small scale industries.

Assessment

Due to its spectacular achievements, the small scale sector has emerged as a dynamic and efficient decentralised sector which is closely integrated on the one hand with agriculture and allied sectors and on the other with large scale industries. The contribution of the small scale sector has also rightly to be judged from the socio-economic angle i.e. provision of self-employment opportunities, development of industrial activity in rural, backward and far-flung areas, utilisation of local raw materials for value addition and ensuring better earnings to the farmers and artisans, development of entrepreneurship in unemployed youth, women and economically weaker sections of the society, restraining migration from rural to urban areas through provision of facilities at the very door steps in the rural areas, upgradation of skills of traditional artisans, etc. Although there is no specific yardstick to measure the social impact, the achievements in this field are quite apparent.

Why this sickness

The rapid progress of the sector has, however, led to shortfalls in certain areas. The pace of growth of industries has not been even as between different states and territories. Besides, progress has not been upto expectations in realising certain objectives like rapid development of ancillary industries. More important problems which stood in the way of smooth development of the sector were shortages of certain essential raw-materials, power, inadequacy of credit facilities and lack of statistical data. To an extent short term solutions of these problems are somewhat difficult owing largely to unorganised and widely dispersed nature of the industries. A matter of concern is the growing incidence of sickness in the small scale sector. Inspite of a number of measures already undertaken to prevent the incidence of sickness, the problem is still defying meaningful solution. More concerted efforts are required for prevention of sickness at the incipient stage itself as well as rehabilitation of potentially viable sick units.

Growth directions

Modernisation is going to be one of the major challenges for the small scale sector. Everywhere in the world, industries, and more particularly small scale industries, are facing severe competition. To meet the challenges of the present competitive environment, there is urgent need for the small scale sector to upgrade technology, increase productivity and efficiency. Technological infrastructure of the Small Industries Development Organisation is being strengthened through setting up of toolrooms, product-cum-process development centres, regional testing centres, field testing stations, modernisation of selected industries, etc. However, the desired results cannot be achieved unless technological upgradation emerges essentially as a small scale entrepreneur's movement with the Government ensuring provision of essential technological inputs which may be beyond the reach of entrepreneurs.

Although the contribution of small scale sector towards total exports has been increasing steadily, the exports from the sector constitute only 5 per cent of its total value of production which leaves no doubt that the full potential of the small scale sector is yet to be exploited. With the comfortable cushion of a large domestic market, there is no reason why the small scale units cannot generate exportable surplus and enhance their share in exports in the near future. However, certain structural changes would be necessary to bring about a shift in the composition of exports from labour intensive to more technologically sophisticated products.

The small scale sector would also have to constantly strive for entering into new areas of production. A number of such areas have already been identified by SIDO and intimated to the Small Industries Service Institutes for being suggested to prospective entrepreneurs. Some of the thrust areas are computers, industrial automation and organisation of services specially in electronic and instrumentation repairs, engineering plastics, reinforced plastics, glass fibre, medical and surgical items and items for use in agriculture and water management; specialised heat resistant paints, temperature indicating paints, marine paints, thermal insulation paints, anti-radiation paints, chlorophyl dyes, acrylic dyes, etc.

In spite of the emphasis placed on the development of small scale industries in rural areas which have come up in good measure, there are powerful influences which favour the development of small units in urban areas and metropolitan cities. The great social benefit of developing small scale units and their humanising effect would not be fully realised unless the growth of small industries in urban and metropolitan areas is checked and more positive efforts made to develop them in the rural and backward areas.

(*Contd. on page* 9)

It's crucial for development

G. Srinivasan

In this article the author illustrates the ascending influence of the small scale sector in the country's overall industrial production, employment generation, and foreign exchange savings. The growth of this sector has, however, been stymied by many factors, the foremost among them being lack of finance. Government of late, says the author, has initiated a series of steps to put this vital sector on the proper growth path. These steps are bound to revitalise this sector and enable it to play its desired role in the overall development of the economy.

THE WIDELY DISPERSED SECTOR of village and small industries commands a crucial place in the country's economy in terms of production, employment, contribution to foreign exchange earnings and preservation of craftsmanship Small scale industries in the country now accounts for 35 per cent of the total value of industrial production and contributes directly about 25 per cent of the aggregate exports. The sector churns out more than 5,000 products and has emerged as a major supplier of a large number of mass consumption items, making momentous contribution in saving precious foreign exchange. In a developing economy like ours, the ability to generate new job outlets especially in a mileu marked by capital constraints is undoubtedly a valid criterion and in this regard the contribution of small scale industries is no small. The following table illustrates the trends in growth of number of small scale units, value of production, exports and employment during the 1980s :

	Sixth Plan (1980-85)		Seventh Plan (1985-90)	
	1980-81	1984-85	1985-86	1989-90
No. of Units (in '000)	874	1242	1353	—
Production at current prices (Rs. crore)	28060	50520	61100	80220*
Employment (in '000)	7100	9000	9600	11900
Exports at current prices (Rs. crore)	1643	2541	2785	4140*

*At 1984-85 prices.

From the foregoing table illustrating the importance of the country's small scale sector and its ascending influence in the overall industrial production, it is obvious that the small scale industry would continue to grow in view of its inherent advantages of low investment, high potential for employment creation, diversification of the industrial base and dispersal of industries in rural and semi-urban areas. For the fiscal year 1987-88, the target of production

from this sector has been set at Rs. 66,630 crores (at 1984-85 prices) and that of employment by the end of the year at 106 lakh persons. Exports are estimated at Rs. 3,300 crore and it is also proposed to promote 1.46 lakh new units during the current fiscal year as part of the 20-point programme.

Role vis-a-vis large industries

It needs to be stressed that the rapid transformation and modernisation of such large industries as electronics, telecommunications and transport industries place a concurrent obligation on small scale industries to supply high technology ancillary components. Over the years, a number of measures have been taken for the promotion and development of village and small industries. A new scheme of National Equity Fund was initiated in early August 1987 for providing equity support to deserving small entrepreneurs to establish new projects in tiny and small scale sector for the rehabilitation of viable sick units. The scheme was proposed to be administered through the Small Industries Development Fund (SIDF) set up earlier.

Impediments to growth

The growth and development of this sector has been stymied by several factors including technological obsolescence, inadequate and irregular supply of raw materials, lack of organised marketing channels, imperfect knowledge of market conditions, unorganised nature of operations, inadequate availability of credit, constraint of infrastructural amenities including power and dearth of managerial and technical expertise. However, it is gratifying to note that the question of reorganisation of Small Industries Development Organisation (SIDO) to meet the emerging needs of technological upgradation and modernisation is being examined. A Committee is reviewing the capabilities of small units to produce sophisticated items in the reserved list.

Remedial measures

Government is also seized of the credit constraints confronting the small and tiny sector. A package of measures to increase availability of finance for the small scale and ancillary sectors is being formulated. The package might include enhanced working capital limits and automatic escalation of working capital limits in future. According to Mr. N. Ragunathan, the Development Commissioner for small-scale industries, a survey of 300 small and ancillary units revealed that only 65 per cent of the units working capital needs were met while the remaining units faced problem because of inadequate working capital. Lack of sufficient statistics about various small-scale units currently in the country is also one of the reasons why many of the problems bedevilling the industry could not be widely known. At the 40th meeting of Small Scale Industries Board in New Delhi, the Union Industry Minister, Mr. J. Vengala Rao said that the Government has accepted in principle a scheme to conduct an all-India Census of SSI units registered with state directorates of industries. This has been proposed with a view to building up a good data base and information system, which will prove useful in diagonising the ills of this sector.

What associations say

Be that as it may, there has, of late, been vehement and vocal criticism from small scale industry associations like the Federation of Association of Small Industries of India (FASII) and the National Alliance of Young Entrepreneurs (NAYE) that the industrial policy changes undertaken by the Government over the past three years and signs of further modifications would call into question the very survival of this vital sector. They say that though the economic liberalisation is said to be gradually introducing a competitive environment in the domestic industry, it has definitely a detrimental impact on the fortunes of small-scale unit. They say that there has been a progressive and persistent reduction in the number of items reserved for exclusive manufacture in the small scale sector. Government have more recently dereserved a number of items like table fans, TV games, pick-up cartridges, radio and TV coils and assembly of loud-speakers.

Representatives of small scale industry point out that the introduction of broad-banding, re-endorsement of capacity, delicensing of a host of industries and relaxtion of export obligations has benefited large industries to the detriment of small-scale sector But, a hitherto unpublished note circulated by the Development Commissioner, small scale industries on four decades of growth of small scale sector claimed that due to its "spectacular achievements", the small scale sector has emerged as a dynamic and efficient decentralised sector, which is closely integrated on the one hand with agriculture and allied sectors and on the other with large scale industries. However, the Development Commissioner conceded that modernisation is going to be one of the major challenges for the small scale sector. Provision of funds made available through the Small Industries Development Fund and the National Equity Fund for small entrepreneurs would accord them the needed impetus to undertake technological upgradation.

Official version

Official spokesman say that though dereservation of items has been taking place against the backdrop of the compulsion to modernise domestic industry and its ancillaries, the list of reserved items for the small scale sector still hovers around 800. The list of reserved items are added and deleted from the reserved list on the advice of the Advisory Committee on Reservations constituted under the IDR Act, it is stated. The criteria for de-reservation are not 'arbitrary' but are based on genuine considerations. They are, inter alia, as follows : (i) industries where large imports are being allowed and|or where large scale

smuggling is taking place; (ii) industries in high technology areas or those requiring greater impetus for promoting exports which should necessarily be of large size in order to reduce costs and be competitive globally; and (iii) industries where because of constraints on size, the small scale sector is unable to ensure quality production and cannot provide in-house R&D nor induct modern technology.

Government officials also claim that to ensure continuous supply of raw materials at competitive prices, the National Small Industries Corporation (NSIC) is supplying both imported and indigenous raw materials to small scale units on the basis of their actual requirements. In 1986-87, the Corporation distributed raw materials worth Rs. 18 crore against the target of Rs. 10.30 crore. The target for the current year is Rs. 20 crore. The NSIC is also assisting small scale units by making available to them machinery and equipment on hire purchase basis. During 1986-87, machinery and equipment of the order of Rs. 16.70 crore was supplied and the target fixed for the current year is Rs. 17 crore.

Conclusion

The Seventh Plan document has deplored that there has been lack of effective coordination among the myriad support organisations set up over the period for the promotion and development of small scale industries. Quality consciousness has also not been generated to the desired level despite the various measures taken in this regard. Some of the fiscal policies pursued have also resulted in unintended splitting up of the capacities into uneconomic operations and have restricted their smooth transfer to the medium sector. All these constraints have led to a skewed cost structure placing this sector at a disadvantage vis-a-vis the large industries, both in domestic and export market. Government is, of late, alive to these problems plaguing this vital sector and is initiating a series of steps to put this sector firmly on the growth path for the larger interests of sustaining higher industrial production in the country.

In the eventual evaluation what counts is the firm assurance provided by the Development Commissioner (Small scale industries) that the small scale sector "is increasingly being envisaged to play a crucial role in the overall development strategy of the economy specially in the context of the objectives of structural diversification, creation of a base for modern technology with concomitant higher productivity, upgradation of skills and institutional transformation to a more advanced structure of production". Perhaps these lofty ideals would be lived upto by the Government in extending and encouraging maximum support to this vital sector for the larger glory of putting the country firmly in the world's industrial firmament. □□□

Free artificial limbs to rural poor

With a view to providing artificial limbs services to the rural disabled the Institute for the Physically Handicapped, under the Ministry of Welfare, set up a Rural Rehabilitation Unit in October 1987. The Institute during the year 1987 organised three similar camps in Seemapuri, Mangolepuri and Jahangirpuri in Delhi, thereby benefiting about 350 patients.

Artificial limbs like calipers, orthopaedic boots, wheel chairs, crutches, tricycles are given free to the poor disabled persons with less than Rs. 1200 per month income. Those earning above Rs. 1200 and below Rs. 2500 get these aids at half rates; whereas the people earning more than this have to pay full price for them.

(*contd. from page* 6)

Availability of adequate credit continues to be one of the critical factors affecting the smooth growth of small scale industries. Setting up of Small Industries Development Fund in May 1986 has been a very welcome step for providing assistance for development, expansion, diversification, modernisation and rehabilitation and small scale units. However, the financial institutions and commercial banks at the primary level would have to pay special attention for inculcating confidence and trust among the small entrepreneurs.

New Dimensions

The relevance of small scale sector to India's economic development has been increasing with the passage of time. While keeping the objectives of employment, equitable distribution of national income, mobilisation of resources of capital and skill and industrial dispersal in sharp focus, the sector is increasingly being envisaged to play a crucial role in the overall development strategy of the economy specially in the context of the objectives of structural diversification, creation of a base for modern technology with concomitant higher productivity, upgradation of skills and institutional transformation to a more advanced structure of production. □□□

(Courtesy : Laghu Udyog Samachar)

Small Scale sector : problems and prospects

—Nirmal Ganguly

The article is a detailed study of the performance, policies, problems and prospects of the small scale industry sector. In spite of the vigorous efforts made to promote this sector, it suffers from certain major problems such as non-availability of raw material, finance, marketing facilities, encroachment of its areas by medium and large scale sector, etc. etc. These problems call for special remedial measures so that the growth rate of the sector is accelerated and it becomes an effective and potential instrument in the economic and industrial development of the country.

THE GROWTH OF SMALL SCALE SECTOR has been one of the most distinctive features of India's Industrial economy during the last one and a half decades. The significant role that this sector plays in the development stragety of India's economy is not only based on the fact of its being labour intensive and capital saving in character but also because of a very substantial contribution that this sector has been making towards industrial growth in recent years. In fact, small scale sector accounts for about 35 per cent of our total industrial production. The strategic role of small scale sector in the country's economy has also been recognised because it has proved to be a powerful instrument for a rapid and decentralised growth of a developing economy like India with large army of unemployed labour and paucity of capital resources. Moreover, the small scale sector is conceived as an important means for checking concentration of economic powers in a few hands and bringing about economic dispersal as also more equitable distribution of national income. This sector is also considered very effective for promoting industrial development of backward areas. It also helps in checking the unplanned migration from rural and semi-rural areas to the urban metropolis by way of setting up industrial units in the rural and semi-rural areas, thus providing employment in the rural and semi-rural areas itself. The significance of the small scale sector also stems from the fact that it greatly encourages the development of new entrepreneurial initiative, thus injecting competition in our industrial economy. Small scale sector also assumes great significance from India's stand point since this sector accounts for around one fourth of India's total exports.

Performance

The growth of small scale industries has been one of the most encouraging features of India's industrial economy during the last one and a half decades.

This is evident from the fact that the number of small scale units has increased from 4.16 lakhs in 1973-74 to about 13.53 lakhs in 1985-86. During the same period, production from this sector at current prices increased from Rs. 7200 crores to an estimated figure of Rs. 61,228 crores registering a spectacular growth of 750 per cent. According to the present indications available, the production in 1986-87 at current prices is estimated provisionally at Rs. 72,250 crores. Employment in this sector too has increased from 39.7 lakhs in 1973-74 to 96.00 lakhs during 1985-86 and during 1986-87, employment level in this sector is anticipated to have reached the level of 100 lakhs.

The Small Scale Sector now produces more than 5,000 products. It has emerged as a major supplier of mass consumption items like leather and leather goods, sheet metal goods, bicycles and bicycle parts, plastic and rubber goods, stationery, soap, detergent, domestic utensils, tooth paste and tooth powder, preserved fruits and vegetables, wooden and steel furniture, flash light torches, boot polish, paints and varnishes, etc. Among the sophisticated items, mention may be made of TV sets, electronic control systems, transistor radios, hearing aids, intercom sets, electric carbon resisters, electronic medical equipment such as cardiac pace makers and ECG machines, electronic teaching aids, digital measuring equipments, air conditioning equipments, miniature bulbs, optical lenses, drugs and pharmaceuticals, electric motors, dye stuffs, pesticide formulations, photographic sensitised paper, etc. The contribution of the small scale sector in saving precious foreign exchange through production of a large number of import substitution items cannot be under-estimated.

It is interesting to note that the small scale sector has already proved its flexibility in adopting modern technologies. In the high technology area, the sector was the first to introduce electronic typewriters, electronic survey equipment, security and time alarm systems with significant value addition within a short time frame.

Export performance

The export performance of the small scale sector has been equally creditable. The exports increased by over 600 per cent during 1973-74 to 1985-86. During 1984-85, exports from small scale sector contributed about 22.5 per cent of the total exports of the country.

It is also pertinent to note that 91.2 per cent of the export from the small scale sector are accounted for by non-traditional exports. In fact, the share of the small scale sector in the total exports would be more, if its contribution in the form of indirect exports were to be taken into account as the small units supply a large volume of parts and components that go into the assembly of finished products by the large scale sector. During 1984-85, exports of sports goods, processed tobacco, snuff, lac and many items of plastic originated exclusively from the small scale sector. In addition, the sector accounted for 92 per cent of exports of marine products, 90 per cent of readymade garments, 84 per cent of woollen garments, 61 per cent of leather and leather products and 30 per cent of engineering goods. To meet the country's expanding foreign exchange needs, it is extremely important that all our efforts are made to further accelerate exports from this sector.

Under seventh plan

During the Seventh Plan Period, the production in the small scale sector is targetted to increase from Rs. 50,520 crores to Rs. 80,220 crores (at 1984-85 prices), export from Rs. 2,350 crores to Rs. 4,140 crores and employment from 90 lakh persons to 119 lakh persons. This means that the production would increase at a compound growth rate of 9.7 per cent, employment at 5.8 per cent and export at 12 per cent per annum respectively during the Seventh Plan Period 1985-86 to 1989-90.

The following table indicates the target of production, employment and exports during the 7th Five Year Plan (1985-86 to 1989-90) and the targets and achievements during the first two years of the Plan and the targets set for 1987-88 :—

	1984-85	1985-86		1986-87		1987-88	1989-90
		Targets	Achievements	Targets	Anticipated Achievements	Targets	Targets
(a) Production (at 1984-85 prices) (Rs. in crores)	50,520	55,225	57,100	61,130	64,500	66,630	88,220
(b) Employment (lakh persons)	90	95	96	100	100	106	119
(c) Exports (Rs. in crores) at 1984-85 prices).	2350	2630	N.A.	2950	N.A.	3300	4140

It will be observed from the above table that the targets set for the first year of the Seventh Five Year Plan in respect of production and employment have not only been achieved but exceeded.

Policies and programmes

The Industrial Policy Resolution of 1956 had underlined the need for a small industries development programme to ensure that the small scale sector acquired sufficient vitality to be self-sustaining. For this purpose, it was considered essential that the techniques of production of small scale enterprises should be constantly improved and modernised and that serious handicaps of small scale producers such as lack of technical and financial assistance, inadequacy of facilities for tooling and testing, unsuitable working accommodation, etc. should be removed progressively to increase the efficiency of the small scale sector as a whole. To fulfil these objectives, the Small Industries Development Organisation (SIDO) was established by the Government of India in 1954. The SIDO functions as the nodal agency for formulating, coordinating and monitoring policies and programmes for promotion and development of small scale industries in the country.

Reservation of industries

Reservation of industries for exclusive manufacture in the small scale sector is one of the important protective measures of the Government to assist SSI units. Entry of large/medium scale units is prohibited in reserved areas except on condition that the unit concerned would export a minimum of 75 per cent of its total production. The reservation policy is kept under constant review and items are added/deleted from the list depending upon the emerging situation. For this purpose, the Government has constituted an Advisory Committee on Reservation under the Industries (Development & Regulation) Act, 1951. Initiated in 1967 with 47 items, today as many as 850 items (as on 13-2-1987) are reserved.

The reservation policy

Reservation grants protection to small-scale units by preventing fresh capacities to be created in the large scale sector in areas which are highly suitable techno-economically for manufacture in the small-scale sector, the only exception being made in the case of large units which give an undertaking to export 75 per cent or more of their total production. Furthermore, the Government have notified in September, 1986, that all restrictions governing production in excess of licensed or registered capacity by industrial units would be removed provided that 100 per cent of such additional production would be exported. Such units could produce items reserved for the small scale sector. The large or medium scale units which are in existence at the time when an item is reserved are allowed to continue their manufacturing activities but their capacities are pegged with reference to a specified data. By restricting the entry of large or medium scale units and permitting those already in existence to operate only within specified limits, reservation policy ensures that all future demand for reserved items is met by small scale units.

Criteria for reservation

The overwhelming consideration for reservation of an item is its suitability and feasibility for being made in the small scale sector without compromising on quality aspects. The Advisory Committee makes its recommendation after taking into consideration :—

(i) The nature of any article or class of articles which can be produced economically by the ancilliary or small scale industrial undertakings ;

(ii) The level of employment likely to be generated by the production of such article ;

(iii) The possibility of encouraging and diffusing entrepreneurship in the industry ;

(iv) The prevention of concentration of economic power to the common detriment ; and

(v) Such other matters as the Committee may think fit.

Criteria for dereservation

The Advisory Committee makes its recommendations for dereservation on the basis of following criteria :

(a) Industries where large imports are being allowed and/or where large scale smuggling is taking place.

(b) Industries in high technology areas or those requiring greater impetus for promoting exports which should necessarily be of large size in order to reduce costs and be competitive internationally.

(c) Industries where because of constraints on size, the small scale sector is unable to ensure quality production and cannot provide in house R&D nor can it induct modern technology.

Impact of reservation

Analysis of data of growth of reserved industries upto 1981 has shown that the total number of units in the reserved list was 1,44,000 in the post-reservation period showing an increase of 133 per cent. The average annual increase in the number of units for reserved items was about 30 per cent against 16 per cent increase in the small scale sector as a whole. Capacity for reserved items increased from Rs. 17,090 million in pre-reservation to Rs 40,250 million in post reservation showing a rise of 135 per cent. Analysis has also revealed that new units had

come up for 79 items in post-reservation period for which no unit had existed earlier. The items where comparatively larger number of units and capacity were set up were rice milling, cotton cloth knitting, woollen knitted wears, wooden furniture, exercise and note books and registers, tanned hides and skins-semi finished, leather shoes, wax candles, laundry soap, safety matches, fire clay bricks and blocks, steel furniture and agricultural implements. Significantly, out of total 68,000 units registered during 1981, more than 32,500 units or over 47 per cent were set up in identified backward districts, 7,000 units in No Industry Districts and only 5 per cent units in metropolitan cities. This shows that the policy of reservation of industries for exclusive production in the small scale sector has greatly contributed to building of industries, capacities as also industrial development of backward areas.

Violation of reservation

There are indications that there have been incidents when the reservation policy has been violated. In quite a few times, some of the large scale units manufacturing reserved items are found to be producing for in excess of their licensed capacity. There have also been some instances when large scale units have set up subsidiary units to manufacture reserved items although subsidiary units of large scale units are not permitted to be registered as small scale units. However, in order to mitigate and resolve these problems, Government have constituted a Committee to check the entry|expansion of large| medium scale units into areas reserved for the small scale sector.

Marketing assistance

Marketing is primarily an entrepreneurial responsibility and small scale units have been undertaking marketing operations of their own. However, the Small Industries Development Organisation (SIDO) has been providing indirect support to the marketing efforts of the small scale units by preparing for their guidance, industry prospect sheets, area survey reports etc. which give detailed information on the status of industry, the demand for the product, the marketing channels etc. In addition, the Central Government Purchase Programme and the Ancillary Development Programme have been undertaken for assisting the small scale units in providing an assured market for their products.

In order to further help the small scale industrial units in marketing their products, the Small Scale Industries Corporations in States are tendering on behalf of the small scale industrial units to the various agencies including Directorate General of Supplies & Disposals, Railways, Defence and State Stores Purchase Authorities. The basic objective behind this approach is that SSI units which are scattered throughout the country and their resources being limited, cannot participate in Government Stores Purchase Programme individually.

The Government happens to be the largest single purchaser of various items produced by the small scale sector. The assistance programme of the Government includes reservation of items for exclusive purchase from small scale units as also price preference upto 15 per cent on products when there is competition between large and small scale units. The number of items reserved for exclusive purchase from small scale sector has progressively increased from 16 in 1956-57 to 409 in 1984-85. Besides, 13 items have been reserved for purchase upto 75 per cent and 28 items upto 50 per cent of the total requirements.

The total value of indigenous purchases made by DGS&D and the share of SSI in these purchases during 1980-81 to 1985-86 are as follows:

Year	Total value of Indigenous Purchases (Rs. crores)	Value of Purchases from Small Scale Sector (Rs. crores)
1980-81	1432.58	197.35
1981-82	1763.56	221.50
1982-83	1802.11	218.04
1983-84	2212.74	270.42
1984-85	2409.97	288.08
1985-86	2557.98	280.96

Financial assistance

Small scale industrial sector raises the term credit and working capital required by it from Commercial Banks and State Financial Corporations. The banking system provides mainly working capital and the State Financial Corporation mainly investment capital. Financial assistance in kind is available to the small scale industrial sector from the National Small Industries Corporation (NSIC) at national level and the State Small Industries Development Corporations (SSIDCs) at state level which supply machinery on hire-purchase basis. Besides, the Industrial Development Bank of India (IDBI), the National Bank for Agriculture and Rural Development (NABARD) and the Industrial Credit and Investment Corporation of India (ICICI) provide refinance facilities to banks for financing small scale industrial sector. The credit provided by banks to small scale industrial sector is treated as credit to 'priority sector'. The commercial banks are required to lend 40 per cent of net bank credit to the priority sector of which SSI is an important segment. Outstanding credit of public sector banks to the small scale industries rose phenomenally from Rs. 251 crores in June, 1969 to Rs. 7,808 crores in June, 1986 registering an increase of over 30 times. Similarly, the share of small scale industries out of total bank credit advanced by public sector banks increased significantly from 8.3 per cent in June, 1969 to 14.8 in June, 1985. The number of small scale

industrial units assisted by the public sector banks also rose in a marked manner from 0.51 lakh in June, 1969 to 19.98 lakhs in June, 1986, recording an impressive increase of over 32 times.

A series of new policy initiatives have been taken with the objective of providing credit to the small scale units on liberalised terms and strengthening and coordinating the activities of financial and other institutions providing assistance to this sector. The financial institutions are being impresed upon to adopt a flexible approach in sanction of credit limits to small scale units, so that the small scale units receive adequate credit and to ensure that relatively small units are not left out.

The Reserve Bank of India have set up a Standing Advisory Committee to review the flow of institutional to the small industries sector and other related matters and to suggest measures for improving the performance of the credit delivery system. The Committee is also expected to monitor the flow of credit to the small scale sector and take care of the constraints.

Small Industries Development Fund

Recognising the need for further encouragement for rapid, healthy and efficient growth of small and decentralised industries, the Small Industries Development Fund (SIDF) was set up in the IDBI in May, 1986 with a corpus of Rs. 2,500 crores. The Fund is expected to play a significant role in assisting the small scale sector in its orderly and efficient growth and to pay special attention to the problems of tiny industries. SIDF will provide re-finance assistance for development, expansion, diversification, modernisation and rehabilitation of small scale units Besides, SIDF will also assist institutions engaged in the promotion, financing and provision of extension services to the small scale sector.

National Equity Fund

The Government have also decided to set up a National Equity Fund in the IDBI for providing equity support to small scale entrepreneurs for setting up of new projects and also for rehabilitation of potentially sick units. The details in this regard are being finalised.

Technology Upgradation

In order to effectively respond to the emerging economic situation and successfully face the competitive environment, it is extremely important for small scale units to induct new technologies and upgrade the existing ones on a continual basis.

With the above end in view the Small Industries Development Organisation (SIDO) has established Product-cum-Process Development Centre for Ceramic and Glass Industry at Ranchi, Product-cum-Process Development Centre for Sports Goods and Leisure Time Equipment at Meerut, Product-cum-Process Development Centre for Casting and Forging at Agra and Product-cum-Process Development Centre for Domestic Appliances at Bombay.

Moreover, the programme of modernisation of selected industries is being implemented in respect of 20 industries on All India basis and 38 industries selected on the basis of concentration in different states. The units opting for modernisation are to register themselves with the Office of the Development Commissioner (SSI). On registering the units, quick and detailed studies are conducted to assess the modernisation needs of the individual units and the units are then assisted to implement the recommendations made by the experts in the field.

Moreover, a Working Group under the Chairmanship of Dr. S. M. Patil to recommend technology upgradation by the small scale sector has since submitted its report for consideration of the Government.

District Industries Centres

The District Industries Centres programme was initiated on 1st May, 1978 with a view to providing an integrated administrative framework at the district level to accelerate the pace of industrial development in a planned and composite manner under a single roof concept system. The total number of approved DICs during 1986-87 stands at 419 covering 428 districts.

In order to make the District Industries Centres move effective, organisational pattern of the District Industries Centres has been restructured keeping its conceptual base intact.

SESEUY

The scheme for providing self-employment to educated unemployed youth was started in 1983 with the object of mitigating the problem of unemployed educated persons in the country. The scheme caters to educated unemployed youth who are matriculates or above and are within the age group of 18—35 years and such beneficiaries are usually chosen from vulnerable sections of the society. The scheme was recently modified and is to continue during the Seventh Plan Period. In the modified scheme, the beneficiaries for industrial and service ventures will include ITI passed young persons apart from matriculates and above. The limit of loan for industrial ventures has been increased from Rs. 25,000|- to Rs. 35,000|-. In the case of service ventures the limit remains at Rs. 25,000|- while in the case of business ventures, the limit has been reduced from Rs. 25,000|- to Rs. 15,000|-. However, the level of

subsidy in all types of ventures is fixed at 25 per cent. As mentioned earlier, the scheme is meant for lower income sections of the society and as such the family income per annum of the beneficiaries should not exceed Rs. 10,000|- per annum. Further, there is a reservation of 30 per cent for Scheduled Castes| Scheduled Tribes. As against the target of 2.50 lakh in 1985-86, the number of beneficiaries were 2.21 lakh involving an amount of Rs. 429.99 crores sanctioned by banks. A target of 2.50 lakh persons in each of the years from 1986-87 to 1989-90 has been set.

Problems

Inspite of vigorous efforts being made to promote the small scale sector as a matter of conscious policy decision, the small scale sector does suffer from certain problems which require special attention so that the growth rate of this sector can be accelerated further so as to ensure that this sector really becomes an extremely potent and effective instrument for bringing about economic federalism in the true sense of the term. The following are the major problem areas which require immediate and urgent attention of all concerned :—

(i) Constraints relating to regular, timely and adequate availability of raw materials, imported components and equipments on a regular basis.

(ii) Inadequacy of financial assistance.

(iii) Problems relating to quality and technology upgradation.

(iv) Lack of effective marketing back up.

(v) Encroachment of the areas reserved for small scale sector by the medium and large scale sector.

(vi) Slow pace of progress so far as ancillarisation is concerned.

(vii) Cornering of benefits in a number of cases by the larger units within the ambit of small scale sector as compared to tiny units which constitute the overwhelming majority of the modern small scale industrial sector.

(viii) Large scale incidents of industrial sickness in the small scale industrial sector.

The problems mentioned above are some of the major constraints affecting the performance of small scale sector. There can be no two opinions that if these problems are resolved then it will greatly contribute towards further accelerating the rate of growth of the small scale sector.

Prospects

In epilogue one can mention that the small scale sector in an overpopulated and resource scarce country of continental dimension like that of India, undoubtedly plays a very significant and strategic role. It is interesting to note that during the Sixth Five Year Plan (1980-81 to 1984-85), the small scale sector registered a growth rate of 9.5 per cent at constant prices as against 6.4 per cent overall industrial growth rate. Moreover, during the first year of the Seventh Plan i.e. 1985-86, the small scale sector registered a growth rate of 12.8 per cent at 1970-71 constant prices as against 8.7 per cent overall industrial growth rate during 1985-86. It goes without saying that the overall industrial growth rate during the recent years would have been significantly lower if the small scale sector would not have shown this much of dynamism. It is all the more creditable because much of this higher growth in the small scale sector is contributed by the tiny units accounting for fixed investment of less than Rs. 2 lakh each. Recognising the overwhelming importance of the small scale sector, in the revised index of industrial production with 1980-81 as the base, 49 items exclusively from the small scale sector have been decided to be included in the revised index of industrial production with 1980-81 as base. Out of these 49 items from the small scale sector, 18 items have already been considered while preparing the revised index of industrial production with 1980-81 as base. The great significance of small scale sector in India's industrial economy can also be appreciated from the fact that the very inclusion of 18 items in the preparation of revised index of industrial production with 1980-81 as base, has significantly contributed to the acceleration in the overall industrial growth during the recent years, thus making the revised index more representative.

In the end, it must be mentioned that, in essence, there is no dichotomy or contradiction between the growth of small scale sector and medium and large scale sector. In fact, our avowed policy is to encourage the small scale units to graduate into medium scale units and medium scale units into large scale units. In fact, accelerated development of the small scale sector will also help in the healthy, speedy and vibrant growth of medium and large scale sectors resulting in fostering of strong linkages between these sectors. The importance of ancillarisation programme in this regard can hardly be overemphasised. Therefore, the relationship between the small scale sector and the medium and large scale sector, has but to be mutually complementary and reinforcing in character.

(continued on page 26)

Focus on small scale sector

Small Scale industries—ills and remedies

Birendra Kumar Dixit

Taking stock of the situation in the small scale sector the author here laments that one out of every thirteen units is said to be sick today. Giving various 'internal' and 'external' causes for this sad situation the author suggests a number of remedial measures. In his view if ills like inadequate technical know-how, outdated production process, faulty allocation, inefficient evaluation etc., are remedied and measures like entrepreneurs' training, concerted efforts of promotional agencies and financial incentives, etc., are taken, this sector could be able to play an important role in the country's economy.

IN A CAPITAL SCARCE LABOUR abundant nation like ours, wedded to twin objectives of growth and justice, Small Scale Industries play a pivotal role in the industrialisation of the economy. They are considered as harbingers of economic progress and responsible for transformation of traditional economy into industrial one

Promotional policies

Realising the importance of this employment generating sector, both the Central and the State Governments have taken several measures to encourage the small scale sector. In fact the increasing allocations made in the successive plans, cheap credit on priority basis, tax benefits, subsidies, concessions in import of raw materials and machinery, reservation of several items for exclusive production etc., reflect the promotional and protectionist policies adopted by the government towards the development of this sector. As a result of these policies the Small Scale Sector has occupied a key position in the industrial structure of the country providing employment to about 9 million people, earning foreign exchange to the tune of Rs 2,350 crore and contributing 40 per cent of the industrial production.

Problems

But unfortunately such a vital sector with so much protection and encouragement is not free from problems. The problems are severe and consequences are disastrous i.e. closure of units. It is rather distressing to note that one out of every thirteen units is said to be sick today. The bank loans outstanding against sick units are put at Rs 1,000 crores, representing about 15 per cent of total credit to this sector. What is particularly depressing is that over four fifths of the sick units are viable and more than three fifths of the loans are due from such units. Further an analysis of current statistics on Small Scale Industrial Sector reveals that growth in sickness rate is more than the growth rate of Small Scale Units in our country. Thus, can we say that the

encouragement given to this sector has resulted in negative growth rather than positive growth?

Causes

The problems of Small Scale Units are broadly classified into internal and external causes. The internal causes are mainly at the unit level due to lack of product management. Some of them are inadequate technical know-how, locational disadvantage improper layout, outdated production process, obsolete machinery, high cost of inputs, defective pricing policy, weak market organisation, lack of market feed back and market research, poor sales promotional techniques, unimpressive brand and packaging, poor equity base, siphoning away of funds, overtrading adverse debt equity ratio, heavy inventory built up, poor collection policy, over centralisation, lack of professionalism, poor collection policy, over centralisation, poor industrial relations etc. These problems make the unit gradually sick and turn them economically non viable.

External problems are those which are beyond the control of those managing the units. Such causes are infrastructural bottlenecks, non availability of critical raw materials, power shortage, Government controls and policies, fiscal duties, procedural delays in sanctioning licences etc. Inflationary and recessionary trends in the economy, lack of co-ordination among agencies responsible for the growth of the sector, natural calamities, wars, sympathetic strikes and so on.

Thus the problems in Small Scale Industry are manifestations of several maladies in the working of the units. They can be dovetailed into production, marketing, finance and personnel management.

Management

Management is the basic input required for making the unit a successful one. Quite often it happens that there is a likelihood of disputes amongst the partners. A complex business situation requires the dynamic leadership coupled with sharp business accumen on the part of the leader of the enterprise. In the case of Small Scale Industries the strength of dynamic leadership appears to be very low in many cases. The owner|manager fails to analyse the strength and weakness of his organisation. The result is that he|she is not well prepared to face the problem. Besides, the unsuccessful entrepreneur tends to lose confidence in the business resulting low morale while dealing with the employees in the organisation.

Production

Perhaps the predominant factor that influences the industrial sickness is the non-availability of suitable machinery supplies with an obligation to supply the same on turnkey basis. The other reasons sometimes happen to be lack of sound production planning and control system, technological obsolescence, scarcity of raw materials, improper lay out, high cost of inputs, Government policies, lack of R & D setup etc. Because of their smallness and weak financial position small units are forced to buy on credit from middlemen who keep higher profit margins. The other alternative is to go in for cheap and inferior raw materials which affects quality of the finished product. Besides, irregular Government supplies of raw materials will affect their production programmes. Therefore some times they have to buy in black market at prohibitive prices, which upset all their cost calculations.

Marketing

This is one of the important forces responsible for the success and growth of industrial process. The poor quality control system, uneconomic pricing, inadequate facilities of market research, inadequate funds to launch heavy advertisement campaigns, quite often result a good product however it might be, in not receiving its due market share. Sometimes the attitude of big business houses deliberately tends to ditch away the units and ultimately to rockout the units from the market segment through heavy advertisement and publicity They also suffer from the problem of branding and packaging

Inadequate funds

One of the potential problems encountered by small units is inadequate amount of funds available with the organisation. Quite often it is a practice that estimates at the project appraisal itself tend to be quite erratic resulting high cost escalations and eventual losses. The financial problems sometimes arise accidentally or sometimes deliberately created by the entrepreneur himself, to syphon off some of the funds from this unit to another unit in which he has vested interest, making the former sick. But in the case of genuine financial problems sometimes the entrepreneur confronted with high interest burden, on account of high debt-equity ratio, payable to the financial institutions|banks. Sometimes at the project execution stage unusual delay is caused due to inadequate funds for acquisition of fixed assets and so on. Perhaps all these problems do arise due to lack of proper financial planning and management.

Financial management is the amalgamating force of conducting, co-ordinating and controlling the various activities in the business. It is simply systematized common sense and not a pursuit of abstractions. All Senior and successful businessmen apply its methods and modes to carve their achievements. Every business set up for survival and growth must not gamble but plan. Planning is looking ahead into the uncertainties of future and making advance preparation. We have found in our survey that 83 per cent of units have failed to have a Financial Plan.

These problems prompted us to conduct a survey to make an indepth analysis in order to know if there

are any other problems than the general ones listed above. Accordingly in the period between April—August 1986 we conducted a field survey in Bellary district of Karnataka State. We surveyed 101 units failing under different industry groups broadly classified into Agro based and Non-agro based units. These units were selected on startified random sampling method.

TABLE 1

Distribution of Sample Units

Industry Group	No. of Units
Agro Based	
Rice Mills	16
Oil Mills	11
Saw Mills	06
Cotton Ginning & Pressing	10
Total (A)	43
Non-Agro Based	
Engineering & Foundry	20
Plastic	05
Chemicals	05
Mineral Products	09
Food & Beverages	06
Miscellaneous	13
Total (B)	58
Total (A+B)	101

Nearly 1|3rd of the Agro based units are beset with financial problems and 1|2 (Approx) of Non agro based units have marketing problems namely distribution channels, packaging, advertisement campaign etc. Besides, these general and identified problems we have come across certain other important problems during the survey which we will discuss in detail in the following pages:

Poor managerial skill

We are of the opinion that sickness in a unit is co-extensive with the individual managing it. It is because most of the small units are set by sole proprietors who have poor|no managerial skill. Hence these units are highly personal in nature. Their success or failure to a large extent depends upon the intuition of owners|managers rather than on their skill and judgement. Gunnar Myrdal in his 'Asian Drama' writes that Asian Societies lack adequate men with right attitude. Indian entrepreneurs at urban and metropolitan centres with guts, skill and ambition do exist; but qualities like motivation, sense of commitment, business morality are invariably absent in small entrepreneurs.

We subscribe to the view of Gunnar Myrdal. In our survey we have found that 65 per cent of entrepreneurs in agro based group and 27 per cent of non agro based group were carrying on both trading and industrial activities. In most cases we have found that the subsidies, concessional finance, etc., obtained for the unit are diverted to business ventures. Sense of commitment is beyond their comprehension. Hence, most of these units are on the verge of closure.

Managerial load

Though small firms possess the frame work for centralised control, quick decision making and prompt implementation, the small entrepreneur in general finds it difficult to cash on these advantages because he is either a production oriented engineer or sales oriented merchant. He has no time to manage other managerial functions. We have also found the new entrepreneurs who have come forward to start small scale units but do not have adequate experience in the field. They also do not possess the required perception and skill to run the units successfully. Most of the time they run the units on trial and error method These units are dogged by financial illiteracy.

Faulty allocation

In a way Government is mainly responsible for high incidence of sickness. The Government in the guise of reducing regional imbalances and to improve backward areas, has extended a host of concessions. Most of projects in these areas are taken up by incompetent, unemployed graduates, who do not possess any knowledge of industry|business. The Government officials are more concerned with starting new units and achieving targets set rather than the survival of the units. Quite often many persons enter the industry having been motivated by an intensive campaign by the Governmental institutions promising them every thing for almost nothing.

Inefficient evaluation

We are aware that failure to prepare comprehensive financial plan is one of the main causes for sickness. In our survey we have found that even banks financial institutions have financed the small scale units indiscriminately to achieve their targets either under pressure or with over enthusiasm, without an adequate evaluation of the project. Most of the times feasibility report is not prepared by the units. Even if it is prepared, it will be giving a rosy picture and prepared only to satisfy the requirements of lending institutions. In few cases our respondents have said that officials in charge of evaluation of project do not possess specialised skill in evaluating the project and thereby it ends up in either no finance made available

or delay in finance both of which are dangerous for the health of the unit.

Remedial measures

The maxim 'prevention is better than cure' cannot be ignored in the context of small units. The problems of a Small Scale Industry are varied and should be tackled effectively, just as a cancerous growth in human body is attended to immediately. If not, it will develop itself into a big tumour and ultimately destroy the body.

Government's attitude

A change in attitude is required from the Government to solve the problems of SSU. It should assess the project objectively before sanctioning. Besides, while sanctioning a unit, the qualities in the entrepreneurs like risk taking, organising ability, competence, integrity, honesty, creativity and so on must be X-rayed. Hope this will, to some extent, prevent the present state of unemployables converted into Entrepreneurs attracted by wide publicity by the industry departments of various states to start new units.

Entrepreneur's training

A true 'entrepreneur' is one who germinates the concept, takes initiative, seizes the opportunity, bears the risk, promotes the organisation and manages it inspite of odds to achieve the set goals. In fact he acts as a 'spark plug' to transform the economic scene and bring a new dynamism in to it. We have to prevent sickness in units, proper guidance training and consultancy services should be made available to the entrepreneurs. Government can think of tackling this problem by establishing specialised Agency or through existing agencies like DIC's etc. to conduct Entrepreneurial Development Programmes for imparting management skills and make them aware of management techniques.

Promotional agencies

The District Industries Centre concept which has been adopted to act as a single window agency to coordinate all the activities for the promotion of SSU is not able to achieve the objective. We often find that the entrepreneur is asked to move to various offices like banks, financial institutions, municipal corporations, electricity departments, tax departments etc. we have found that much of the energy and valuable time of the entrepreneur is being lost in running to these offices to fulfill the requirements. Besides, there is no co-ordination in the activities. Therefore we feel that if at all we have to alleviate problems of Small Units there should be co-ordinated efforts of all agencies concerned with the promotion of SSU.

Financial and fiscal incentives

Heavy cash outflow by way of interest payments due to high debt equity ratio is another severe problem. The interest burden starts pressing the backbone of the unit right from the day of sanction of loan. Thus any delay in commercial production, will have an adverse impact on the finance of the unit. Generally a unit takes at least 2 years to establish itself in the market. During this time the interest burden will be so heavy that even profit making units in future years also face the brunt. Therefore, we suggest that a portion of long term debt provided by financial institution be converted into equity in a phased manner.

Further the rates of interest charged by lending institutions are also not encouraging compared to corporate sector. Because of tax shield enjoyed by corporate sector, the effective cost of debt will be far lesser. In this context SSU does not enjoy any tax shield, if at all it enjoys it depends upon the tax bracket in which it falls. In sum, the effective cost of debt is comparativey high in SSU. The lending institutions should think of reducing the interest rates further and proper control be exercised to see that the loan amount is effectively utilised. At this juncture we feel that some Income Tax concessions should also be extended to this sector. Firstly, the units should be encouraged to plough back profits through tax incentives. Secondly, there is a need for separate tax schedule giving higher exemption limit and lower rates of taxes.

Marketing

The marketing problems of SSU range from pricing to packing. Any amount of increase in productivity does not help unless there is a decent outlet for the product. We suggest that consortium approach will take care of such problems. Further, periodic fairs and exhibitions may be of help at the district level by the concerned industries department. Atleast this will bring both the producers and consumers together at a place and get to know about each of them.

Crucial role

The Small Scale Sector is considered as an elixir for all the ills of a developing economy like ours. This sector has been assigned a crucial role to play in the Seventh Plan. It is expected that this sector should achieve a compound growth of 10 per cent to augment its annual output by Rs. 30,000 crores to 80,200 crores, to improve foreign exchange earnings through exports by Rs. 1,800 crores to Rs. 4,140 crores and provide additional employment to about 6.9 million people apart from the existing 9 million already employed The targets set in the plan speak about the strategic role this sector has to play in the plan period. We are afraid that unless the problems encountered by this sector are weeded out the targets set may just remain on paper. ☐☐☐

Financial Constraints of small scale sector

Dr. R. R. Azad
&
Miss Usha Arora

The Small Scale Sector plays an important role in our national economy with its relative low capital intensity, high employment generation and potential for the development of rural and backward areas. But finance is sorely lacking in this sector. Even after a good amount of financial assistance and credit facilities, small scale sector suffers a lot for want of financial assistance. The very high rates of interest charged for loans, blockage of capital, dependence on unorganised sources, delay in payments of bills, and lengthy procedures of financial institutions create obstacles in the growth of small scale units. It needs a well-planned policy and procedure to overcome these shortcomings and constraints, says the author.

SMALL SCALE INDUSTRY IS A VITAL ORGAN of our national economy as India remains mainly a country of small scale production. The small scale sector has grown phenomenally since the inception of Industrial Policy Resolution 1956. A variety of revisions in the definition of small scale industries shows its significance in making of an industrial image of the country. At present the investment limits in fixed assets of small scale sector have been revised from Rs. 1 lakh to Rs. 2 lakhs for Service-Oriented Small Scale Unit (Tiny Unit), Rs 10 lakhs to Rs. 35 lakhs for Small Scale Unit and Rs. 15 lakhs to Rs 45 lakhs for Ancillary Unit The major revision of investment limits shows the impact from July, 1980 when these were revised to Rs. 1 lakh, Rs. 20 lakhs and Rs. 25 lakhs for Tiny, Small Scale and Ancillary Units respectively.

Small scale sector plays an important role with its relative low capital intensity, high employment generation and potential for the development of rural and backward areas. It is a major supplier of mass consumption items in general and sophisticated items in specific areas. It has made the largest export in a few items like readymade garments, engineering goods, finished leather products and marine products.

Progress of the sector

The progress of small scale sector during the last decade has been remarkable. It is estimated that the number of small scale units has reached to 10 lakhs approximately from 3.12 lakhs in 1973-74. The production in this sector has been earmarked to Rs. 40,000 crores at present. The small scale units provide employment to about 2 crores of persons in

all. The fixed Capital per employee, on an average, in small scale industrial unit is about Rs. 3170. Even more notable than these statistics is that the Government has provided a number of facilities to the small scale sector, like reservation of 838 items for exclusive production in small scale sector, 384 items for exclusive purchase from small scale units, provision of price preference of 15 per cent, extension services, hire purchase facility, marketing help and financial assistance. Although the Government has constituted the various focal points and agencies for the financial assistance to the small scale units even then the finance available to these units is not in sufficient volume for the purpose of capital investment and working Capital requirements. No doubt, there has been a significant increase in the assistance provided by the All India Financial Institutions, State Financial Corporations, Small Industries Development Corporations, Commercial Banks but, with all that there is a big chasm separating requirement from supply such that the small scale entrepreneur is denied for

Finance, the stumbling block

It is a well known fact that finance is the life blood of any sort of business—trade, commerce or industry. But the enterprises engaged in industrial production realize a great need of finance according to their form, size and capacity. In a small scale industry the vital need of finance is realized very badly due to its limited sources and that too with a cumbersome procedure. Each process and every progress of small entrepreneur concerning setting up of the unit or production, or quantity, or quality, or advertisement, or marketing is based on flow of funds and sound financial structure. Small Scale Sector is deficient in many ways and needs a lot of improvements in toning up the financial conclusions It is a hard fact that the finance is sorely lacking in the small scale sector There is also an acute shortage of credit available in this sector

Presently the financial needs for small scale units are broadly of two types—long term and short term. The long term finance is required for setting up the plant and machinery whereas short term finance is required for defraying the working capital and current expenses. The main sources for long term finance are State Financial Corporations and a few Commercial Banks while the short term finance is provided primarily by the Commercial Banks. But these institutions do not provide the finance to small units at source to the extent of genuine requirement. In fact the non-availability of finance from institutions in requisite measure creates a situation of financial crisis in small scale sector and forces the small entrepreneurs to rely on other sources of their own savings, friends and the unorganised money market etc.

Existing credit facilities

It will be appropriate to give a profile of existing credit facilities available to the small scale sector at present. Under the schemes of Industrial Development Bank of India. The State Financial Corporations provide seed capital assistance to small entrepreneurs for taking up their projects in backward areas. The assistance is provided in the form of equity or soft loan subject to a ceiling of 20 per cent of project cost or Rs 23 lakhs whichever is lower. The other scheme of IDBI is operated through the agency of State Industrial Development Organisation or State Industrial Development Corporation covering entrepreneurs establishing projects upto a cost of Rs. 1 crore.

Seed|margin money assistance is also provided under DIC programme to promote small industries in semi-urban and rural areas. Seed money is also given to State Corporations to enable them to obtain institutional finance to supply machine on hire purchase terms to small units ; and assistance for consultancy services to small units. Normally the seed money assistance is 10 per cent of the total fixed capital investment, but for entrepreneurs belonging to Scheduled Castes and Scheduled Tribes, this assistance may be upto 15 per cent of total fixed Capital investment or Rs. 20,000 whichever is lower. Under the State Aid to Industries Act, State Governments provide finance in the form of loans, guarantees for loans raised from banks, subscription to shares and debentures etc. These loans are advanced on soft terms and are repayable in easy instalments spread over 10 years. The rates of interest vary from State to State. Besides disbursing loans as agents of State Governments, State Financial Corporations also provide medium and long term finance to small scale industries out of their own funds. In the case of limited Companies and Co-operative societies, loans are advanced from Rs. 10,000 to Rs 30 lakhs and in the case of others at a margin varying from 25 per cent to 50 per cent. The rate of interest charged by Financial Corporations varies from State to State. It is notable that the finance provided by State Financial Corporations has fallen far short of the needs of small scale units during recent past years.

If we take an account of working capital or short term loans provided by Commercial banks, we find that the credit facilities at concessional rates are extended to small industries against the security of raw materials|semi finished goods|finished goods or factory type basis. Reserve Bank of India has given instructions to commercial banks to allocate 40 per cent. of their credit to the priority industries in small scale sector. Although the credit allocated to small scale sector by Commercial banks has gone up over time but the share of credit given to small scale industries stands less than 25 per cent of the credit given to the industries as a whole.

In 1981, the replacement of the Credit Guarantee Scheme brought forward a new scheme known as small scale Industry Guarantee Scheme 1981. Under

this scheme the guaranteed advances to small scale industries show an increase of Rs. 300 crore approximately but the claims of guarantee disposed of seem to be far less than the claims received. It has been very much so for the last five years. It can be easily supported by the data available from April, 1978 upto April 1981. During these years the claims of guarantee were received for Rs. 138.89 crores while the claims disposed of stood at Rs. 30.89 crores.

Refinance Scheme

In addition to the above mentioned credit facilities the small scale units avail the refinance assistance from IDBI through the various eligible institutions viz., commercial banks, State Co-operative Banks, Rural Banks, State Financial Corporations, State Industrial Development Corporation and State Industrial Investment Corporations. The refinance is given at a concessional rate of interest, varying from 8.5 to 10 per cent and loans upto Rs. 5 lakhs have been put on a fully automatic basis. The IDBI also provides indirect assistance through its scheme of Rediscounting Machinery Bills.

The National Small Industries Corporation and State Industries Corporations have also come forward to provide assistance in small scale sector by way of supply of plant and machinery on hire-purchase basis; training facilities; technical knowhow, testing facilities, supply of raw materials and components both indigenous and imported The value of machinery given on hire purchase system by the NSIC has increased to about Rs 1500 lakhs in 1984-85 from Rs. 906 13 lakhs in 1975-76

Over all shortcomings:

After this detailed study of credit facilities available in small scale sector the question arises whether these facilities are adequate to meet the financial needs of small scale sector or not. Although commercial banks give long term loans, the major source of long and medium term finance to the small scale sector has been the State Financial Corporations and of the short term loans, the Commercial Banks. In absence of appropriate data we simply assert that even after a good magnitude of financial assistance and credit facilities provided by SFCs and Commercial Banks to small scale units, the shortage of credit facilities is still more acute in small scale sector Right from 1970 to 1986, there has been a wide gap between loans sanctioned and disbursed by these institutions. Only 58.2 per cent long term lendings could be made to this sector upto 1986 Thus in the absence of sufficient credit from these institutions and banks the small scale units are compelled to borrow from the unorganised sector at high rates of interest varying from 25 per cent to 36 per cent. Now, whether it is capital expenditure or working capital expenditure, borrowings at such high rates of interest is extremely damaging to a small scale unit It not only enhances the cost volume of output but pushes back the entrepreneur in quality product and brand name also. The high cost of capital results in the high cost of final goods. Sometimes it creates the cost escalation of a small unit.

Thus the small scale units suffer a lot for want of financial assistance in requisite measure. The financial assistance|credit facilities are not provided at the proper time. The delay in clearing the proposals either raises the establishment cost or compels the entrepreneurs for closer of unit. Besides, the small entrepreneurs are again compelled to meet their financial requirement from unorganised sectors at a very high rate of interest.

There is a wide difference between the rates of interest charged by Commercial banks and by rural money lenders. The following table gives a comparative view about rates of interest charged.

TABLE

Rate of Lending of the Unorganised and Organised Sector

		Rates of Interest charged (Percent)
1	Lending by Rural Money Lenders	Upwards of 25 36
2	Lending by Commercial Banks to Small Scale Sector	
	A—SHORT TERM	
1.	Composite Loans upto Rs. 25,000	
	(i) Backward Areas	10 25
	(ii) Other Areas	12 50
2	*SHORT-TERM ADVANCES LIMITS OF*	
	(a) Upto and including Rs 2 lakhs.	Not exceeding 15.00
	(b) Over Rs 2 Lakhs and upto Rs 25 Lakhs.	Not exceeding 17.50
	(c) Above Rs 25 Lakhs	Not exceeding 19.50
B.	*LONG-TERM*	
1.	Units as in the new definition of SSI	
	(a) Backward Areas.	12.50
	(b) Other Areas	13 50

The above table reveals that the rates of interest charged by Commercial Banks on their short term lending are very high. Rates of interest of 10 per cent to 12 per cent are charged on composite loans of Rs 25,000 which is a small amount. On larger borrowings of Rs. 2 lakhs, between Rs. 2 lakhs and Rs. 25 lakhs and above Rs. 25 lakhs the rates of interest are 15 per cent, 17.5 per cent and 19 5 per cent respectively. These are very high rates of interest for short term borrowings. Moreover the 19.5 per cent rate of interest charged for loans above Rs. 25 lakhs is same as that charged to other sectors.

And in case of unorganised sector, the lendings are made at fantastically higher rates of interest varying from 25 per cent to 36 per cent. These high rates of interest cripple prospective small scale units.

The delay in payment of bills by both the public and private sector units also creates severe financial problems to the small scale units. The small units have only limited financial resources to meet their current expenditure. But their Capital is blocked up in credit supply of their product. Thus they again fall under continuous financial stress and their dependence on outside sources of finance gets increased. Prompt Settlement of Bills can ease this problem.

In absence of a clear picture regarding long term and short term financial requirements, the new units are bound to face problems like: borrowings from unorganised sectors at a very high rate of interest, purchasing of sub standard equipments, producing poor quality goods, inadequate inventories etc. Mostly, banks do not consider the small scale units credit worthy and hesitate to grant loans and other financial facilities to them. Sometimes the short fall in the financial requirements of a small unit leads to sickness and ultimate closer. It is clear that banks do not provide any consultancy services and professional guidance at the time of setting up and considering the long term and short term financial requirements of a small unit for lending purposes.

We can safely assert that the present system of providing financial assistance and credit facilities to the small scale sector needs overhauling. It's a great demand of time that Government agencies and Commercial banks should come forward to recognise all the units in small scale sector of great importance for the gorwth of industrial economy. The present situation can not be altered through reservation of items for small industries or through provision of exclusive purchase facility. The upward revision of investment limits in small scale sector indicates the most requisite and timely extension in financial assistance and credit facilities to the small scale units.

Suggestions

Prior to conclusion it is proposed to put forward a few constructive views for the consideration of authorities and institutions :—

1. It is high time to adopt the idea of limited partnership with a view to boost up the financial resources in small scale units and to encourage the small entrepreneurs to bear the risk within the limited liability.

2. More finance should be made available to the small units keeping in view their long term and short term requirements. The financial institutions and commercial banks must encourage the entrepreneurs in the initial stages of the operation of new units and consider their credit worthiness. The banks should act as consultants to small scale units for the purpose of planning their financial needs, selecting appropriate manufacturing and testing process, building up proper marketing strategies and setting up appropriate financial controls. In this manner the financial institutions and commercial banks can provide accurate financial assistance and credit facilities as also professional guidance to small scale units.

3. The borrowings should be made cheaper by lowering the rates of interest on lendings of commercial banks especially for short term loans.

4. The timely disposal of credit proposals should be stressed upon to save the small entrepreneurs from paying exorbitant rates of interest to the unorganised sector.

5. The payment of bills must be made promptly to the small scale units. The Government should set some guidelines to avoid the delay in payment of bills by large units of the public and the private sector.

6. The re-orientation programmes, workshops and seminars should be organised at District or Division level to provide the latest informations to the small entrepreneurs.

7. The compulsory registration of small scale units with State level agencies can assist the whole government machinery and Financial Institutions in allocation of credit and other facilities.

8. Severe punishment should be set for the entrepreneurs found misusing the funds or otherwise seeking financial assistance in bogus names. A preventive measure should be chalked out to provide a check on malpractices of the larger units playing in the name of small units. ☐☐☐

Rheumatic Heart Disease Control Programme

The Government has launched the Rheumatic Heart Disease Control Programme during the 7th Plan. Stressing the role of risk factors like smoking, lack of exercise, stress and overeating in the rising incidence of heart diseases, the Government has initiated various health education measures to highlight the hazards of smoking.

Rheumatic heart disease among children is highly prevalent in India and other developing countries. A study by Indian Council of Medical Research estimates its incidence to be nearly 4-5 million among school going children. The overall incidence of heart disease in the country is estimated to be 36—38 per 1000 persons. ☐☐☐

It does need spoon-feeding !

Navin Chandra Joshi

The launching of the SIDF (Small Industries Development Fund) under the IDBI is a step forward towards the orderly and efficient growth of the Small Scale Industries. But will this alone suffice to keep up the pace? The author feels that the amount of Rs. 2500 crores under this scheme is not commensurate with the demands of the increasing number of small scale industries. He is of the opinion that the small scale sector needs an apex bank on the pattern of the NABARD or the EXIM BANK to cater solely to their needs if this sector is to remain viable in terms of production, employment and foreign exchange Savings.

WITH A VIEW TO PROVIDING a focal point at the apex level for coordinating financial assistance to small-scale industries, the Union Government launched in May, 1986 the Small Industries Development Fund (SIDF) with a corpus of Rs. 2,500 crores. This Fund, under the Industrial Development Bank of India, will provide assistance for development, expansion, diversification and rehabilitation of small-scale units to promote their orderly and efficient growth. It will also provide support to institutions engaged in promotion, financing and provision of extension services to the small-scale sector. The decision to set up the Fund is welcome, coming as it does in the wake of reduction in the debt-equity ration of small-scale units from 1:3 to 1:2.5 in the beginning of this year in a bid to ensure greater reliance of industry on internal accruals.

The small-scale sector always complained of resources crunch and has been suffering from further investments. It was not provided sufficient finances from institutions as is evident from the fact that its share in priority sector lendings has gone down from year to year. In 1980 of the total such lendings of Rs. 6,730 crores, the small sector got Rs. 2,636 crores, while in 1985 these figures were Rs. 18,407 crores and Rs. 6,608 crores respectively

It may be recalled that A.M. Khusro Committee which reviewed, among other things, the availability of credit to small-scale sector, had recommended that National Bank for Agriculture and Rural Development (NABARD) and Industrial Development Bank of India (IDBI) should function as apex financial institutions for the small-scale sector. The committee also suggested creation of a National Equity Fund for small units. Now with the setting up of SIDF, it will be relatively easier to look after the financial needs of small units and dispensation of credit is likely to be speedy though much will depend on efficient functioning of disbursement agencies.

The SIDF

The SIDF has an initial cash contribution of Rs. 100 crores from the IDBI's general fund. Out-

standing assistance under refinance, seed capital and bill rediscounting scheme to the small-scale sector (including small roads transport operators) comprising of Rs. 2,400 crores will also be transferred to this Fund. It was a matter of regret that the IDBI's refinance for the small-scale sector (exclusive of SRTO) came down to 17 per cent in 1984-85 from 19 per cent in 1982-83. With the growth of small industries, the term loan requirements as also working capital loans have been rapidly increasing. In industry circles, it is felt that the establishment of SIDF has come as an anti-climax as the apparent sizeable amount of Rs. 2,500 crores is not anything different from what is actually being currently deployed. The small units were getting Rs. 2,400 crores which amount represents a transfer to SIDF from IDBI. At present, IDBI outstandings to small industrial units amount to around Rs. 2,400 crores. As such, there is no significant increase in the availability of total finance meant for deployment in small sector. Recently, a large number of units came within the realm of the small-scale sector as the definition of a small unit was enlarged by providing for a maximum investment in plant and machinery from Rs. 20 lakhs in 1980 to Rs. 35 lakhs since 1985. Therefore, the pressure of demand on the limited financial resources of SIDF will be much more while the size of the cake remains almost stagnant for a larger number of claimants.

Need for an apex bank

In the wake of the Khusro Committee Report, there was disappointment when the demand for creating an apex bank for small-scale units was ruled out. The representatives of the small sector had been impressing upon the government the need for a specialised banking institution to cater to their financial requirements. Initially, the committee itself favoured the setting up of an apex bank and had advocated the establishment of two apex banks, including one for the tiny and village units. The committee, it is said, had been influenced by the objections raised by the Reserve Bank of India and as such, revised this decision. It is well-known, however, that the apex bank for agriculture, called NABARD, came into being only because of the strong political will. The powerful farm lobby succeeded in overcoming all sorts of objections. Likewise, the EXIM Bank too would not have been set up but for the persistence of the Union Commerce Ministry. Probably, the small sector has no powerful patrons. The small-scale industry has been facing acute financial shortage, both for capital investment and for working capital. Commercial banks and financial institutions have failed to do justice to this sector.

There are at present about 13 lakh units in the small-scale decentralised sector and 97 per cent of those have an investment of Rs. 2 lakhs or less in each. They produce more than 5,000 items ranging from the simple to the highly sophisticated. The phenomenal growth is in no small measure due to the fairly active policy direction given by the government. The seventh Plan envisages a growth rate of 10 per cent in the small-scale sector. By the end of the Plan period, its contribution in industrial production is expected to rise to an impressive Rs. 80,000 crores. There is confidence that the target can be even higher.

Sick units

Another major economic issue that faces the government is the fate of thousands of small sick units. Their rehabilitation is a task that has defied any one-shot formula in the past. Even with the passing of some laws and adoption of new measures, there is nothing to suggest that the task would prove any easier in the future. One over-tried solution has been nationalisation with or without prior management takeover. But the government has come to realise to its dismay that such a solution does not work for various reasons. Every year large government funds are being drained off by these ailing units without showing any sign of ever turning the corner. That realisation has now made the government change its track a little bit.

Revival measures

Now steps have been initiated to set up a board for industrial and financial reconstruction which will take preventive, ameliorative and remedial measures for the revival of sick and potentially sick companies. The necessity for the board is being felt because of growing industrial sickness and the need to strengthen the existing arrangements to combat the same. The Sick Industrial Companies (Special Provisions) Act, under which the board is to be set up, was passed last year. The government has already laid down policy guidelines for taking preventive and remedial action to reduce industrial sickness and rehabilitate the sick units. Banks and financial institutions are required to strengthen the monitoring arrangements and take appropriate action on the basis of diagnostic studies. It is provided that the government would give necessary assistance, where feasible, as per the rehabilitation package prepared by the banks and financial institutions. The Income-Tax Act has been amended providing for tax benefit which can be given to healthy units when they take over sick units by amalgamation with a view to reviving them. Out of an estimated 13 lakh small units in the country, 90,000 units are sick. Small units have, therefore, been clamouring for a specialised financial agency exclusively for them. If IDBI can deliver the goods, surely the small-scale sector may not press for such a separate agency. Hopefully, a new fund, called National Equity Fund, which has already been cleared by the Planning Commission, may be set up in the near future.

The national equity Fund

The National Equity Fund will provide seed capital to small entrepreneurs, possibly with an accent on tiny units and rural industries. Now the small industry's demand for reducing the cost of borrowing should receive attention as also be acceeded to. Institutions at the apex and state levels may examine the scope for making available cheaper credit to small units, especially tiny units. The norms proscribed by banks in assessing working capital requirements of small-scale industry need to be re-examined. It is also necessary to fix a separate sub-target for small-scale sector as is the case, say, in agriculture, to ensure its healthy growth. Advances to this sector require a coordinated approach between the RBI, the state financial corporations and the commercial banks. Presently, small-scale units find that RBI guidelines regarding simplification of procedures are not being complied with by commercial banks. The term loans of SFCs involve long delays in sanction. So is the case with working capital and the borrowers have to pay interest on term loans without getting working capital and in situations of delayed production. It is therefore necessary to provide for extra working capital for a few years after modernisation programmes are completed. There should be concessional interest rates even for advances over Rs. 25 lakhs.

Simplify Procedures

Another crucial aspect to be looked into seriously is the existence of the plethora of laws which entail visits by about 40 inspectors from various departments. There is an urgent need for reducing the number of forms required to be filled up by a unit as also the need to club the various law-enforcing agencies under different groups. It is amazing that despite so many roadblocks, the small-sector has managed to survive with many units alive and kicking. The Federation of the Association of Small Industries of India (FASII) has pointed to the strangulating clutches' of the inspectors who seem to have a hey day. How to keep the law and such inspectors at arm's length is perhaps the main problem before the small units and their proprietors. Since most of the small units are one-man or two-men shows 'inspectors' visits' have had a deleterious effect on their fortunes. It is worth exploring whether the small sector itself can evolve a voluntary code to observe the existing law in letter and spirit. This might help to meet the legitimate concern of the authorities that the generous concessions and funds given to genuine small industrial units are not appropriated or misused by bogus units. □

(*Contd. from page* 15)

Annexure I

ESTIMATES OF PRODUCTION : INVESTMENT. EXPORTS & EMPLOYMENT OF SMALL SCALE SECTOR

At the end of the year	No. of units (Lakh Nos.) (Cumulative) 1		Total No. of Units	Production (Rs. crores) at current prices	Production at 1970-71 prices (Rs. crores)	Investment (Rs. in crores) at current prices	Exports (Rs. in crores) at current prices	Employment (Lakh Nos.)
	Regd.	Un-Regd.						
1	2	3	4	5	6	7	8	9
1973-74	1.64	2.52	4.16	7200	5161	2296	393	39.7
1974-75	2.22	2.76	4.98	9200	5450	2697	541	40.4
1975-76	2.46	3.00	5.46	11000	6425	3204	532	45.9
1976-77	2.68	3.24	5.92	12400	7078	3553	766	49.8
1977-78	2.96	3.74	6.70	14300	7980	3959	854	54.0
1978-79	3.34	4.00	7.34	15790	8797	4431	1069	63.8
1979-80	3.92	4.13	8.05	21635	10025	5540	1226	67.0
1980-81	4.48	4.26	8.74	28060	10906	5850	1643	71.0
1981-82	5.23	4.39	9.62	32600	14837	6280	2071	75.0
1982-83	6.07	4.52	10.59	35000	12800	6800	2097	79.0
1983-84	6.87	4.71	11.58	41620	14021	7350	2159	84.2
1984-85	7.57	3.85	12.42	50520	15810	8380	2541	90.0
1985-86	8.53	5.00	13.53	61100	17840	9585	2785	96.0
1986-87 (Provisional)	—	—	—	72250	—	—	—	100.0

IDBI and small scale industries

—Dr. S. P. Srivastava

The role of IDBI becomes more significant in view of the refinance facility provided by the Government to the State financial corporations—says the author while dealing with the performance of IDBI in providing financial assistance to small scale sector. The author feels a separate financial institution needs to be set up to cater to the needs of small scale sector.

SMALL SCALE INDUSTRIES have an important role to play in achieving the plan objectives of increasing industrial production, generating additional employment and reducing regional imbalances of growth. Since capital intensity and gestation period of these industries are smaller than their bigger counterparts, employment and production can be increased in a shorter period of time. The development of small scale industries to a great extent depends upon a number of inputs, viz.—technology, labour, finance, managerial efficiency. Finance assumes great importance because non-availability of timely and adequate finance acts as a severe restraining factor.

Financial institutions

The financial requirements of small scale industries are met mainly through equity and borrowings. Various agencies engaged in providing finance for small scale industries may be grouped as—(i) indigeneous bankers and money lenders; (ii) public deposits, (iii) commercial banks and Regional Rural Banks (RRBs); (iv) industrial co-operatives and (v) Special Financial Institutions including Industrial Development Bank of India (IDBI) State Financial Corporations (SFCs), State Industrial Development Corporations (SIDCs) and Industrial Reconstruction Bank of India (IRBI).

The Table-1 below shows the assistance sanctioned and disbursed by special financial institutions to project in small sector.

TABLE-1

Financial Assistance Sanctioned and Disbursed by Special Financial Institutions to Small Scale Sector.

(Amount in Crores of Rs.)

Institutions	1983-84		1984-85	
	Sanction	Disbursement	Sanction	Disbursement
*IDBI	737 9	578 5	934 7	727.1
IRBI	0 7	0 7	1 3	0 2
SFCs	461 0	305.0	539.7	368.7
SIDCs/SIICs	9 1	5 8	11 1	9 4

*Comprising assistance under refinance and bills rediscounting scheme to SSI and SRTO

Source Report Currency and Finance (Vol. I) 1985-86.

It is evident from the table that among various institutions, assistance to small scale sector is mainly provided by IDBI and SFCs and the share of

SIDCs|SIICs and IRBI being negligible. Since the financial assistance of SFCs include refinance provided by IDBI, the role of IDBI is most significant in providing financial assistance to small scale industries. The present paper deals with the performance of IDBI in providing financial assistance to small scale sector.

Role of IDBI

For obvious reasons, the IDBI by itself cannot provide financial assistance to all industrial units, large and small, operating in different parts of the country. It has, therefore, evolved a method under which assistance to small and medium enterprises is made available mainly through schemes of indirect assistance by way of (i) refinance of industrial loans sanctioned by SFCs, SIDCs and commercial|co-operative and Regional Rural Banks, (ii) rediscounting of bills for sale of indigenous machinery on deferred payment basis and (iii) seed capital assistance to entrepreneurs by way of risk capital operated in association with SIDCs and SFCs. IDBI also extends considerable resource support to term financing institutions catering to the requirements of small entrepreneurs through subscription to their capital| bond issues.

Refinance assistance

The number of eligible lending institutions through which refinance loans are granted has been increasing progressively. The number of such institutions has gone to 86 as on 31st March 1986. During the last five years assistance extended under this scheme has been increasing consistently covering an increasingly large number of small units. Total refinance assistance sanctioned rose from Rs. 748.6 crores in 1981-82 to Rs. 1564.0 crores in 1985-86 recording an increase of 109 per cent (Table 2).

TABLE—2

Refinance Assistance Sanctioned by IDBI to Small Sector

(Amount Rs. Crores)

Year	REFINANCE ASSISTANCE			Total of SSI and SRTO	% of 5 to 2
	Total	SSI	SRTO		
1	2	3	4	5	6
1981-82	748 6	338 7	192.4	531.1	70 9
1982-83	989 9	443 7	265 3	709.0	71 6
1983-84	961 1	424 4	195 1	619.5	64.5
1984-85	1241 9	499 1	296.2	795 3	64 0
1985-86	1564 0	746 2	275 2	1021 4	65.3

Source : IDBI Operational Statistics

Refinance to small scale sector also witnessed an increase of 92.3 per cent from Rs. 531 crores in 1981-82 to Rs. 1021.4 crores in 1985-86. The comparative percentage of refinance to Small Scale Sector to total refinance showed a declining trend in the year 1983-84 and 1984-85 when it declined from 71.6 of the year 1982-83 to 64 5 and again to 64.0. It clearly shows that although in absolute terms the refinance to small scale sector increased, in comparative terms it was not much encouraging. Funds were diverted to sectors other than small scale. In the year 1979-80, to quicken the pace of assistance to small sectors, IDBI introduced Automatic Refinance Scheme (ARS) under which assistance upto Rs. 5 lakhs is provided on a fully automatic basis. ARS has given a boost to refinance assistance. The break up of refinance asistance to small sector between small scale industries and small road transport operators shows an increase of 120.3 per cent and 43 0 per cent respectively over a period of five years.

Bills rediscounting

The assistance availed by small scale sector under bills rediscounting scheme was negligible prior to 1977-78. However, with positive efforts on the part of IDBI mainly through more favourable rediscount rates offered for units in this sector and allocation of separate limits by IDBI to commercial banks for exclusive use by the small scale sector there has been increase in the quantum of assistance under this scheme. The flow of assistance under bills rediscounting increased by 220.3 per cent from Rs. 289.7 crores in 1981-82 to Rs. 928.0 crores in 1985-86.

TABLE—3

IDBIs Assistance by way of Bills Rediscounting to Small Sector

(Amount in Crores of Rs.)

Year	Total Rediscounting	Rediscounting of SSI	3 as % to 2
1	2	3	4
1981-82	289.7	58 8	20.0
1982-83	428.4	80.4	18.9
1983-84	663 7	118 4	17 8
1984-85	634.1	87 7	13.8
1985-86	928.0	111 3	12 2

Source : IDBI Operational Statistics.

The share of small sector in bill rediscounting increased only by 98.3 per cent from Rs. 58.8 crores in 1981-82 to Rs. 111.3 crores in 1985-86. Thus, the percentage share of small sector in total bills rediscounting showed a continuous decreasing trend from 20 per cent in 1981-82 to 12.2 in 1985-86.

Seed Capital Assistance

The introduction of Seed Capital Scheme in 1976 was a significant step towards encouraging new and technician enterpreneurs. The scheme operated primarily through SIDCs and SFCs, is designed to supplement equity contribution which such entrepreneurs could provide for their projects costing upto Rs. 2 crores. Assistance sanctioned under seed capital scheme has been showing a steady increase over the years. From Rs. 8 crores in 1982-83 it

rose gradually to Rs. 10.9 crores in 1983-84 to Rs. 13.8 crores in 1984-85 and Rs. 16.2 crores in 1985-86.

Formation of SIDF:

The IDBI has set up the Small Industries Development Fund (SIDF) in May, 1986, exclusively for the development, expansion, modernisation, diversification and rehabilitation of small scale sector covering a wide spectrum of units in the small scale tiny village and cottage sectors. The SIDF will act as an apex focal point for financial as well as non-financial assistance being extended to small industrial sectors. The fund was started with an initial corpus of Rs. 2500 crores. Assistance under SIDF will be canalised through the existing wide network of intermediary agencies, namely, banks, SFCs, and other supportive organisation for SSI sector.

At the end of June, 1986, the total funds in SIDF amounted to Rs. 2521.22 crores, comprising outstanding loans of Rs. 2054.6 crores, outstanding bills rediscounted of Rs. 274.6 crores, investment of Rs. 31.4 in shares and bonds of industrial concerns and financial institutions and liquid balance of Rs. 160.6 crores.

The IDBI has constituted an advisory board comprising experts in the field of small scale industries to have benefits of their views on various issues regarding assistance to small scale industries.

Thus, alongwith the Central Government, State Governments as well as other institutions IDBI offers various concessional loan, to promote the growth of small scale sector. IDBI's assistance to this sector (including SRTOs) in absolute terms has increased very rapidly during the last five years, but a strong view exists that the financial institutions have not paid adequate attention to the development of this sector as these institutions are attracted more towards assisting medium and large industries than towards financing small ones. SIDF created by IDBI is expected to fill the gap between the demand and supply of finance for small scale sector and play vital role in the promotion of this sector. Recently, the Central Government has decided to create National Equity Fund (NEF) to be operated by IDBI to extend finances to the small sector. NEF will provide equity support to deserving small entrepreneures to establish new projects in tiny and small scale sectors and for rehabilitation of viable sick units. But the IDBI which is an apex financial institution extending only indirect financial assistance to small sector and mainly concentrating on large and medium units, is overburdened with multifarious activities and operations. It would, therefore, be better if a separate financial institution is set up exclusively for meeting the needs of small scale sector on the pattern of NABARD whch was created for meeting the rural needs. □□

Government to set up a National Housing Bank

Government has decided to set up a National Housing Bank. The bank with an initial share capital of Rs. 100 crore will provide re-finance facilities to institutions in giving housing loans to individuals or groups of individuals. This was disclosed by the Union Finance Minister, Shri Narain Dutt Tiwari while launching a Housing Finance Company "Can Fin Homes Limited" sponsored by Canara Bank in New Delhi on December 25, 1987. The National Housing Bank will provide guidelines to housing finance institutions and coordinate activities of all agencies connected with housing.

Shri Tiwary said that Canara Bank Housing Finance Company will take advantage of the new apex level—Housing Finance Institutions. Can Fin, he said is intended to reduce the gap in the availability of housing finance and give a push to house construction activities. He noted that the company will not only finance institutions belonging to middle and higher income groups, but will also refinance Group Housing Scheme for the development of weaker sections of society like SC|ST development Cooperation, weaker sections Housing Development cooperation, slum clearance board, fishermen development etc.

'Can Fin Homes Limited' with its head-office in Bangalore will have 5 branches including one at Delhi. Shri Tiwary assured that the National Housing Bank will render all assistance to all the agencies of the company and other connected with housing.

Specical Programmes for Bonded Labour

According to the latest reports received by the Ministry of Programme Implementation from the State Governments, the total number of bonded labourers identified and freed since the inception of the scheme, was 2,20,340 as on July 31 1987, out of which 1,88,602 have been rehabilitated leaving a balance of 31,738 bonded labourers to be rehabilitated.

Under the Centrally Sponsored Scheme for rehabilitation of bonded labourers, a provision of Rs. 1,178.000 lakh has been provided for the current financial year 1987-88. A target for the rehabilitation of 18,202 bonded labourers has been fixed by the Programme Implementation Ministry for nine States during the current year. The annual targets have been split up into quarterly targets in the proportion of 9 : 18 : 30 : 43 per cent to enable the State Governments to achieve the target fully in a phased manner. Against the target of 3275 bonded labourers (July to August 1987), the State Governments reported rehabilitation of 2426 bonded labourers upto August 1987, the achievement being 74 per cent. □□

Public sector must generate internal resources for investment

Rajiv Gandhi

"The public sector has vital tasks before it in the years ahead. It must continue to take on the primary responsibility for the development and expansion of the infrastructure", emphasised the Prime Minister, Shri Rajiv Gandhi, while addressing the Chief Executives of Public Sector Undertakings in New Delhi on January 14, 1988. He said "it must also remain at the cutting edge of technological development in critical areas. It can perform this role only if large amounts are invested in its expansion, modernisation and in research and development. Increasingly and substantially these investments will have to come from internal resource generation. Resources needed for public sector investment cannot always be met from the Government budget.... It is therefore essential that the mobilisation of adequate resources for investment becomes the top priority for public sector management."

LAST THREE YEARS HAVE BEEN EVENTFUL YEARS for our economy. The Seventh Five-Year Plan has made good progress. Growth has been buoyant. Industrial production has done exceptionally well. Infrastructure has expanded at an impressive pace. Agriculture has withstood the strains of the worst drought in memory. Central plan investments have been fully in line with Plan projections. These large investments in critical areas of the economy give assurance of sustained growth in output and productivity.

Notable contribution

The public sector has contributed substantially to this notable performance. Incremental investment in the public sector has been unprecedented. It is not so long ago that sectors like power, transport, coal and steel—all in the public sector—were viewed as key bottlenecks in the economy. Today they are the strong points. This is the measure of your achievement.

The public sector has had and must continue to have, strategic role in our development. There must be no misconception on this point. But you must not rest on your oars. Much needs to be done to improve the performance of the public sector. This is because of the pivotal role assigned to the public sector in our strategy of development.

We have looked to the public sector to give our economy strength, diversity and durability. It has been the engine of our self-reliance and economic

independence. It has helped us acquire know-how, skills and technology in difficult and new areas. It has fostered ancillary and down-stream units in places which would otherwise have remained untouched by industrial development. It has taken industrial development to backward regions. It has opened up employment opportunities for lakhs of workers.

Massive investment

Today, the public sector dominates the commanding heights of the economy. It also represents an enormous investment of the nation's resources. At the start of the Seventh Plan, total investment in public sector enterprises amounted to about 43,000 crore. By the end of Seventh Plan it would have doubled to about 86,000 crore.

Investments of these magnitudes reflect the scale of my commitment, the Government commitment and the nation's commitment to building a strong public sector. Your and our commitment must also be to ensure that the public sector and the resources invested in it are used more effectively to further our developmental objectives. Our commitment is to improving public sector performance in order to strengthen its role in our future development.

Weapon to fight poverty

We also look to the public sector to be a major weapon in development and in our war against poverty. Poverty cannot be ended without massive investments. Resources for such investment must come largely from the public sector.

While profitability cannot be the sole criterion for judging public sector performance, the public sector has a crucial role in generating surpluses for reinvestment. In this respect, the overall performance of the public sector has fallen short of expectations. Many public sector enterprises have done well and deserve our warmest applause and assurances. But many others have lagged behind plan targets—and this despite the fact that these targets have fully taken into account special difficulties and special circumstances.

Good, bad performers

The outstanding performance of some public sector units proves that there is nothing wrong with the public sector as such. There are good performers and bad performers in the public sector as there are in the private sector. With a sound work ethic, the right motivation, and good management, all our public sector units can achieve the performance the country expects of them.

Generate internal resources

The public sector has vital tasks before it in the years ahead. It must continue to take on the primary responsibility for the development and expansion of the infrastructure. It must also remain at the cutting edge of technological development in critical areas. It can perform this role only if large amounts are invested in its expansion, modernisation and in research and development. Increasingly and substantially these investments will have to come from internal resource generation.

Resources needed for public sector investment cannot always be met from the Government budget. In the earlier stages of our development, the budget was correctly seen as the principal source of investment funds for the public sector. But that was when the public sector was relatively small.

The needs of our country, and the expectations of our people are enormous. These demands will expand in the years ahead. Whether we look at roads or education, health or other social expenditure, there are large gaps waiting to be filled. These needs have to be met through the budget and this will strain the Government's resources considerably. The budget cannot also be expected to bear the added burden of making up shortfalls in public sector resource mobilisation.

It is therefore essential that the mobilisation of adequate resources for investment becomes the top priority for public sector management. This was indeed the role envisaged for the public sector by those who established the planning process. This is the real significance of the phrase "commanding heights of the economy". It implies not only a control over the productive base, but also the capability to continuously expand that base. The task of resource generation is a patriotic task. It is related to our vision of India as a great industrial power.

We do recognise that many public sector enterprises suffer from inherited difficulties which limit their financial capability. These factors have to be taken into account in fixing their resource mobilisation targets. But once these double targets are set, they must be met

Increase efficiency

Resource mobilisation is one side of the efficiency coin. The other side is lowering the costs of production, increasing productivity and improving quality. The public sector provides the economy with some of its most critical inputs. As such, it sets the base level of costs from which build up the total cost of production in different sectors. Efficiency in the public sector can therefore make a major contribution to reducing costs in the rest of the economy. This is what is needed for the next phase of our industrialisation.

What must we do to make the public sector more efficient? Inevitably, we will have to devise specific solutions for individual enterprises. This is a detailed

task for you to perform, in consultation with your ministries. But there are also some general measures which can be identified.

Government's responsibility

Let me begin with what Government must do. To be realistic, we must accept that Government is the owner, and is responsible to Parliament. It cannot therefore remove itself completely from the picture. Yet, Government must be willing to give public sector managements much greater autonomy. We must work towards developing a much more distant kind of relationship between Government and the public sector.

Many departments suffer from a mistaken notion that without detailed guidance from Government on day to day operations, the public sector would go astray. Consequently, there is just too much detailed supervision and red-tapism. Paper work flourishes, but not production or productivity. This must change.

Flexibility in decision-making

I am fully aware that it will not be easy to make the change. The Sengupta Committee had recommended that we should introduce a system of Memorandums of Understanding. These would lay down quantitative criteria and clearly set out the parametres within which public sector units would be expected to perform. This would provide public sector managements with the flexibility they require in decision making.

We have been experimenting for the past year with this system for selected enterprises. Memoranda of Understanding (MOUs) were finalised in reasonable time only for SAIL and ONGC. For most of the units selected, MOUs for the current year could not be finalised in time. Some of the draft MOUs simply did not live up to my minimum expectations.

Accountability

We found that in spite of MOUs being made up, drawn up and very clear directives being given that sufficient autonomy had to be given, the final papers did not have that autonomy. Sometimes, it was the ministries those were responsible, who were unwilling to give up the power that they held. But equally, and equally often, it was the public sector unit which was unwilling to accept the responsibility and accountability.

Handling of PSUs

Sometimes we ourselves are little too enthusiastic in government when we want to give a special thrust to a particular sector or section of Public Sector Undertakings (PSUs), we to show our commitment, set up a complete government department to look after that section. But I have found that whenever a government department has very little augur than PSUs to handle, then they start going into the sort of detail that is not really required for the government departments to do so. We must also in government be more realistic and have work distributed in Ministries in such a manner that no Ministry is left handling only PSUs and no other work, because inevitably that means that they have nothing else to do except interfere in the functioning of the PSUs.

We have learnt from experience on the setting up and signing of these MOUs and we will persevere in this effort. I have directed that MOU's for the selected enterprises for 1988-89 must be ready before the start of the next financial year and I hope that both the Ministries and the PSUs involved will cooperate in this.

True autonomy

The MOUs may not be perfect from your point of view or from the point of view of the Ministry but they are an important first step. I hope they will mark the beginning of a change in culture. I speak of a change in culture because true autonomy for the public sector requires much more than self denial by government ministries. We must work towards a broad-based realisation that public sector organisations are not government departments. They should not be run like government departments. They should not be treated like Government departments.

Some of you have referred to the implications of this approach for Parliamentary scrutiny and the audit conducted by the Comptroller and Auditor General. References has been made to the recent Supreme Court interpretation of Article 12 of the Constitution, which reverses the earlier interpretations under which public sector enterprises were not treated as government.

These issues are already under the consideration of Government. The approach to be taken by Government on these matters will be outlined in the White Paper on the Public Sector which will be presented shortly.

Result oriented management

Once we have a proper system of evaluation and greater autonomy, we would have moved towards another important goal : that of proper accountability. Public Sector managements must in future learn to take independent decisions, justify them and produce results. Their performance will be measured against agreed yardsticks. The public sector also needs to examine its work ethic and its training and personnel policies. The work ethos begins with management. Managers set the example. They cannot expect their workers to improve their attitudes to their work unless they themselves show the way.

(*Contd. on page* 34)

BOOK REVIEW

Mr. Red Tape by L. K. Jha published by Allied Publishers (P) Ltd. Bombay, Calcutta, New Delhi etc. PP : 216, Price : Rs. 100

During his long career as an outstanding civil servant Mr. Jha held a variety of assignments mostly akin to economic and financial administration. That is why the versatile virtuoso in him turned to Economics and was often to the fore in churning out valuable writings which have been accepted as landmarks of experience and expertise in the realms of their relevance. The present volume consisting of two parts, namely 'Bureaucracy in India' and 'Economic Administration in India', is a collection of his select speeches and articles on a number of subjects arranged to fit into the ambience of those broad headings. Mr. Jha is as scholarly as he is knowledgeable and commands a style of expression quite consistent with the subjects which he is given to handle. He has to his credit a rare readability of his writings despite some of the drab technicalities that surround his topics. If extrinsically he is lucid and distractingly stylish, intrinsically he has very much solid to offer, so original and so pragmatic.

He has aptly personified as Mr. Red Tape that ugly snag in official behaviour that goes by that term Francis Bacon like this essay in caricature makes one laugh by dint of its obvious humour so deftly and wittingly handled by Mr. Jha, eventhough for him Mr. Red Tape provokes nothing but tears. Veritably this smallest write-up in the whole volume is pervasive enough to have provided its very title, symbolising the up-manship of the author, rightfully seeking to attract sizeable readership at the hands of scholars, students and the like. Obviously a very attractive and well-printed volume like this, does deserve that, and much more.

R. P. RAHI

Rural Middlemen : Network Of Patronage by H. C. Srivastava & M. K. Chaturvedi. Ashish Publishing House, New Delhi. pp. 136. Price Rs. 100.

The phenomenon of middlemanship which functions as a link between the people and the power centres has been a crucial part of our life for long. It is like market service available to those who can pay to get things done in their favour (if necessary with even violations of established norms and rules) in local administration, state bureaucracy or other centres of power. We are fully aware of the existence of this phenomenon. Public criticism of this phenomenon is mostly confined in urban areas through the print media and that too when there is political overtone to some particular episode. Otherwise we continue to bear with this without any murmur.

There is hardly any talk or criticism of the working of middlemen in rural areas and of their network. Rural middlemanship is a political innovation in response to the governmental activities in developing the rural areas in terms of resources and control.

The book under review is a pioneering study undertaken by two academics specializing in Sociology with scientific design and approach. Going through this book one realises that rural middlemanship is a typical product of the process of depoliticization in the country today. One cannot but agree with the authors that "the generations since 1947 have not renewed their ethical commitment, if any........ There is no social apparatus to renew the ethical commitments. The ruling political party, whose Government launched the development programmes, lost its way. Rural population was left at the mercy of lower-rank bureaucracy and the emerging lumpens who adopted middle manship as a source of livelihood" (page 119).

This is a study which can be highly recommended to all those policy planners, bureaucrats, voluntary organisations and the general public interested in the welfare of the rural people and rural development programme to make them understand the structural sources of emergence and support to rural middlemanship. However, one may not agree with their view that rural middlemanship is predominantly an upper caste network. This may be true of the Hindi heartland but in other areas considerations other than caste factor like group or political loyalty, personal equation with the dispenser of favours, etc. may determine the composition of rural middlemanship. A book meant for serious study, indeed !

—P. Ghosh Dastidar

Farmers' Movements In India by M. V. Nadkarni. Published by Allied Publishers Pvt. Ltd., 13|14, Asaf Ali Road, New Delhi-110002. First published : 1987. Pages 237. Price Rs. 100.00

In recent years farmers' role in the overall agricultural development of the country assumed importance with the growing conscious for bettering their economic conditions as also for bringing them in the mainstream of national life. This study makes an analytical appraisal of their role as well as the problems faced by them in various States of the country. The focus is on agricultural prices and related issues since the later 1970s. The State of Karnataka has been the major area of this study which is based both on secondary data as well as personal visits to villages selected randomly.

Prof. C. H. Hanumantha Rao, in his foreword to the book, observes that while the fact of rural areas being less evelope can be readily conceded, there

nevertheless arise doubts about the efficacy of a strategy which relies mainly on turning the terms of trade in favour of agriculture to alleviate rural poverty. Quoting the author, he says that any unbalanced stress on price incentives to promote production and reduce rural poverty, promotes its own contradictions ....Initial gains to agriculture are cancelled to a large extent through a mad race in inflation, leaving the poor in both sectors badly bruised. The analysis shows that agricultural prices have not been deliberately depressed in India. As such, the main crisis in agriculture is not one of unremunerative prices but of unremunerative or unviable holdings.

The main thrust is on bringing home the point that the issue of rural development is inextricably linked with the development of the whole economy. The proportion of viable holdings has not only been small, but also declining over time. Somehow, the non-agricultural sector has not been fast enough to absorb ever-increasing workforce from agriculture. This, however, is not to suggest that the terms of trade should go against agriculture.

In fact, the tragic part of the Indian situation has been that neither the industrial sector witnessed any significant technical progress, nor did the agricultural sector brought about an appreciable increase in per capita productivity. As such, there has not been any sufficient generation of investible surplus or promotion of home market. The author calls this situation as the crisis of stunted capitalist development. The inability to perceive and alter this situation made the farmers seek an easy palliative in the form of disproportionately increasing the procurement prices and turning the terms of trade decisively in favour of agriculture such as to maintain the golden era of the Sixties and the early Seventies.

Alluding to the question whether farmers' movements represent a progressive force, the author concludes that since the elite farmers' were lukewarm in their struggle for enduring and basic market reforms, there has not been much evidence of a revolutionary progressive motivation in the movements by farmers for taking up the cause of agricultural labour and small farmers. An interesting observation made by the author is that Indian agriculture has acquired capitalist characteristics and institutions which have worked in favour of capitalist agriculture. There is also as yet no convincing evidence to show that farmers' lobbies and movements in India have a more progressive or revolutionary motivation of ending capitalism than their counterparts in the USA. All in all, the book touches upon sensitive issues which have often been neglected by economic researchers. Bibliography is conspicuous by its absence in the book.

NAVIN CHANDRA JOSHI

(Contd from page 32)

Evolve participatory management

A new participatory style has to be evolved for both managers and workers to feel it is their joint responsibility to improve productivity.

At another level, we must look at the staffing practices and patterns of our public sector enterprises. We must make sure that we create jobs where jobs are justified and not end up merely raising the number of people on the roster. More jobs must be created by generating resources for fresh investment and using capital wisely, not by loading existing enterprises with overheads which cripple them financially.

Looking to the future it is necessary that public sector enterprises devote far greater attention to research and development. We cannot remain dependent solely upon imported technology. We look to the public sector to pioneer indigenous technological development.

In conclusion, let me congratulate all those public sector enterprises which have received awards for excellence this morning. Their performance reinforces my conviction that our managers and our workers can and will make our public sector the brightest and the most promising element of our design for development." □□□

(Countery : PIB, New Delhi)

Rs. 50 crore Danish aid to India

India has signed an agreement with Denmark for a Grant-in-aid amounting to Danish Kroner 250 million (approximately Rs. 50 crore). The funds will be used to finance purchases of Danish goods and services for various Indian projects.

A major portion of the Grant (D. Kr. 165 million) will be used for the seting up of windmill farms for generation of electricity. Other projects to be covered by the financing agreement are a moulded paper plant, Jagdishpur Fertilizer Plant, Soya milk production and a feasibility study on renovation of three fertilizer plants

Vocational Course for 500 Schools

The Government proposes to start a new centrally-sponsored scheme under which vocational courses would be introduced at plus two stage in about 5000 schools all over the country by 1990, subject to the availability of financial resources for the purpose. A provision of Rs. 40 crore has been made in 1987-88 for this scheme.

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Regional imbalances or backwardness trap !

— Prof. Atmanand

In this article the author explains the various causes of poverty and backwardness of Bihar. He mainly emphasizes the regional variations in development as the cause of backwardness trap in Bihar and advocates for the formulation of a national policy and economic planning in such a manner that they are directed towards development of the State, region and sub-region. This, he says, is based on the assumption that all the deep-rooted problems in India—and its potentials—are to be found in the State and its regions. Therefore, he feels, the analysis of problems of poverty and economic backwardness of Bihar in terms of regional imbalances and variation in development would reveal some of the important charocteristic features of the Indian economy as a whole. The author, therefore, feels that Bihar can be seen as a major touchstone for our success, as a nation, in economics, administration, politics and as a society.

ECONOMISTS OF INDIA ARE GENERALLY TEMPTED to look at the problems of the country from above. They think of the problem of different parts of the economy in macro terms and compare states and regions and sub-regions in levels of growth, development and productivity. But now the economy of India has changed. The problems and complexities of the modern economy of India are largely due to structural and institutional constraints. It is, therefore, essential that to identify critical problems of econmy of India, the process of economic thinking must be reversed. We must prepare a national policy and economic planning in such a manner that they are directed towards the state, region and sub-region This is, in fact, based on the assumption that all the deep-rooted problems of India—and the potentials of India—are to be found in State and regions. Therefore, the problems of mass poverty, specially the structural and institutional changes needed and the requirements of intensive development of agriculture, industry and services at the regional and area level call for a pattern of intensive and integrated development which reaches down to regions and sub-regions and integrates agriculture, industry and services.

Bihar's own plan documents indicate the following observations :—

"After three decades of development, the economy of the state continues to be characterised by adverse demographic factors, unbalanced income structure, poor infrastructure and low level of consumption." Further, we can also quote some more statements like, "The problems of development in Bihar are essentially problems of slow growth, lack of diversification, recurrrent exposure to vagaries of

nature, endemic poverty and mass unemployment". By implication, statements like these provide criteria for judging the efficacy of planning both within the state and at the national level. State plan documents also recognize the large differences which exist between the natural and human resources and the socio-economic situation of three different regions of Bihar-North, Bihar-South (or Central Bihar) and the Chhotanagpur Plateau.

Slow growth !

The economic progress of Bihar in terms of growth and development has been quite slow and unsteady. This becomes clear when we observe the statistical analysis of economic progress ever since independence. At 1970-71 prices, the rate of growth of net State domestic product in Bihar was 3.06 per cent during the First Plan, 9.92 per cent during the Second Plan, 2.40 per cent during the Third Plan, 2.61 per cent during the Fourth Plan, and 4.97 per cent during the Fifth Plan. Over the entire period the rate of growth was 3.31 per cent. By comparison, the rate of growth of net national product was higher during the First Plan (3.60 per cent), the Fourth Plan (3.40 per cent) and the Fifth Plan (4.97 per cent). Over the entire period it was 3.51 per cent, which was higher. Further, per capita income of the people, which is an accepted indicator of development, rose from Rs. 215.38 in 1960-61 to Rs. 1012.23 in 1982-83 (at current prices). At the same prices, it was Rs. 1174 in 1983-84, being the lowest in the country as against the national average of Rs. 2201. This gap increased from 25 per cent in 1950-51 to 46 per cent in 1983-84. At constant prices, per capita income in Bihar rose from Rs 391.99 to Rs. 448.00 (during 1960-61 and 1982-83)

The annual (three year average) rate of increase in per capita state income in Bihar at current prices was 7.7 per cent between 1960-63 and 1980-83. Between 1960-63 and 1970-73 it was 6.9 per cent and between 1970-73 and 1980-83 it was 8.6 per cent. At constant prices, the annual rate of its growth was 1.0 per cent between 1971-72 and 1981-82. At current prices, it was 9.3 per cent during the same period. At 1970-71 prices, it was 3.57 per cent between 1980-81 and 1984-85

The compound rate of growth of per capita income in Bihar at 1970-71 prices during 1950-82 was 1.62 per cent. But at current prices it was 7.7 per cent between 1960-61 and 1980-81.

Why sluggishness

The above statistical facts clearly indicate that the rate of economic growth in Bihar, measured in terms of average, has definitely progressed during the plan period. But, this state is still the poorest state in the country. The benefits of development have not yet reached the poorest of the poor. This is precisely termed as the paradox of economic backwardness of Bihar. But why ?

While analysing the various dimensions of economic backwardness of Bihar, the one which attracts the attention of the economists most, is the regional variations in development. Regional variations in development within Bihar imply that the benefits of development have not been evenly spread over all backward areas or districts. According to the index of levels of economic development around 1980 prepared by CMIE, Bombay for 409 districts, only two districts of Bihar, like Dhanbad and Patna were above the national index of 100, having indices of 164 and 120 respectively. The index of economic development for the state was 51. There were only three districts having index of development above the state index but below the national index. Remaining districts were having index of development below the state index, ranging between 26 and 50. A similar exercise has been done by the Perspective Planning Division of the Bihar State Planning Board for giving the indices of development for 31 districts of Bihar with the help of 16 indicators of development. According to this analysis the districts of South-Bihar region except Gaya, Nawadah and Aurangabad, are either developed or highly developed. The districts of North Bihar region except Darbhanga, Saran and Begusarai are either backward or developing. However, the districts of the Chhotanagpur region show a good deal of disparities in the level of their development.

Imbalance predominant

According to the Study Report of the District-wise Backwardness of Bihar, 1981, prepared by the Directorate of Statistics and Evaluation, to identify backward areas and to devote special attention for their development, little improvements have taken place in the relative position of the districts in their level of development and still backwardness and regional imbalances are predominant. There is little improvement in the agricultural sector in the districts of Singhbhum, Hazaribagh, Palamu, Giridih, Dhanbad, Katihar, Aurangabad as compared to other districts and also in comparison to the position of 1974. Nawadah, Madhubani, Katihar, Giridih and Palamu continue to be the most backward districts of Bihar.

It is the existence of these imbalances in the level of development and prosperity in different districts and regions that is the root cause of poverty. Although we can choose as many "disparity indicators" as possible but here in our analysis we shall mainly depend upon minerals, agricultural and industrial indicators to find out inter-district differences in levels of growth and development. For the purpose of our analysis we have referred to 'District

Level Data for key economic Indicators, CMIE, Bombay, May, 1982.

Plenty of minerals

Bihar possesses a huge store of mineral ores of coal, iron, bauxite, limestone, mica, iron, pyrite etc., which are used as raw material in modern industries. Minerals like copper, iron, pyrite, beryl and graphite are exclusively found in Bihar.

The Chhotanagpur plateau comprising the districts of Dumka, Dhanbad, Hazaribagh, Ranchi, Singhbhum, Daltonganj and Gaya is physiographically divided into Ranchi and Hazaribagh plateaus by the Damodar Valley. The whole plateau is abundantly graphite are exclusively found in Bihar.

The South-Western part of Chhotanagpur is particuarly rich both in fossil fuel and hydropower resources. Both energy and metallurgical coals are found in the Damodar and Koel river valleys. The entire prime coking coal resources (5470 million tonnes), and the back of the medium coking coal resources in India (18,615 million tonnes) are located within this State. The balance of coal resources are non-coking and suitable for power generation. Most of the superior coking coals occur in the Jharia (Bharat Coking Coal Ltd., TISCO and IISCO) East and West Bokaro and Ramgarh coal fields (Central Coalfields Limited). Coking coal is an essential input in the most metal industries.

In Singhbhum there are rich deposits of iron ore—a source of raw material for major iron and steel mills of TISCO and IISCO. Magnetic deposits of about 10 million tonnes are found in different regions of Palamu district. The most important copper-ore deposits in India are also found in Singhbhum, operated by the Indian Copper Corporation.

The main mica belt, one of the richest in the world occurs near Kodarma in Hazaribagh. Other deposits are found in Palamu and Ranchi though of not high economic value. Vermiculite, another form of mica used in the aircraft industry, is found in smaller deposits in Hazaribagh and Palamu.

The major deposits of copper pyrite in India occur in the then Sahabad district in north Bihar, he source of Sulphuric acid and input for fertiliser industries. Chromite and manganese ores also occur in Singhbhum in substantial quantities. Good quality quartz with over 97 per cent Silica are located in Hazaribagh district.

It is quite apparent from the above account that minerals and mining are not evenly distributed in Bihar. It is the South-Western part of Chhotanagpur area which is endowed with a wide variety of minerals and fuels.

But mainly agriculture

Bihar is basically an agriculture based economy. Of 67 million people in the state, 61 million live in villages and the majority of them are abysmally poor. According to 1981 Census nearly 82 per cent of employed persons are engaged in cultivation against 68.7 per cent for the country as a whole. About 80 per cent of the holdings are less than 2 hectares and nearly 80 per cent farmers are either in the category of small or marginal farmers.

The agricultural lands of Bihar are noted for productivity and intensive cultivation but unfortunately, the agricultural production in the State has remained unstable.

The target of food grain production was 115 lakh tonnes for the 1985-86 the actual achievement was only 113 lakh tonnes. This represents an increase of 10 lakh tonnes over the production of 1984-85 which was 103.20 lakh tonnes. The productivity per hectare increased from 1075 Kg. per hectare in 1984-85 to 1095 Kg. per hectare in 1985-86. But the per capita availability of food-grains is only a paper exercise, for the actual avail-in 1984-85 to only 141.25 Kg. in 1985-86. But that is on account of the population increasing faster each year compared with the increase in agricultural production. The per capita availability of food grains is only a paper exercise, for the actual availability to the people in the state is much lower. It is estimated that more than 50 per cent of the people live below the poverty line, and income distributions are so uneven that only the top few avail the most what is available.

So what ! it's uneven

The report of CMIE, Bombay, May, 1982 prepared for district level data for Key Economic Indicators, lcarifies that geographical pattern of agricultural growth has been highly uneven and the inter-district differences have been quite large. There has been marked variation in the growth profile of agricultural indicotors among the districts of three geographical regions of Bihar. Among the predominantly agricultural regions North Bihar and South Bihar regions, much progress has taken place in the districts of South Bihar region.

In all the districts gross irrigated area as percentage of gross cropped area has been much higher than the national as well as State average percentage, whereas only four districts of North Bihar region out of 15 districts have such a distinction. However, among the districts of South Bihar region inter-district defferences as per agricultural indicators are less acute than differences in the districts of North Bihar.

Analysing the regional disparity in terms of per capita production of foodgrains, we find some startl-

ing conclusion. Only three districts, namely, Rohtas, Bhojpur and Aurangabad have higher per capita production of food grains than the national average of 166.3 Kg. Among the argriculturally predominant districts, the districts having less per capita production of food grains than the State average of 120.8 Kg. were Siwan, Katihar, Saharsa Gaya, Munger, Madhubani, Samastipur, Sitamarhi, Patna, Muzaffarpur, Vaishali and Darbhanga.

Wider inter-district gaps

Further, we notice that inter-district differences exist on a much larger scale in terms of rainfall, weather prevailing during the crop-season, availability of irrigation facilities and supply of inputs. Since the productivity of the land depends upon these important variables, it has been found that productivity of the land (per acre or per worker) has varied on a large scale. This is now considered as the important cause of low growth rates in agricultural production.

Regional variations can also be examined with respect to industrial development. As already pointed out above that industrialisation in Bihar has mainly taken place in three districts of South Bihar and it has no spread effects. Even in terms of sectoral composition we notice that ever since the First Plan, the percentage contribution of the industrial sector has not improved much. Analysing the data prepared by the Directorate of Statistics and Evaluation, Planning Department Government of Bihar, the percentage distribution of NDP at factor cost, at current prices for agricultural and industrial sectors has been quite significant. In 1970-71 the agriculture contributed 56.35 per cent in total net NDP at factor cost whereas the industry contributed 9.87 per cent. Although the percentage share of agriculture has been continuously declining, the position of industry has marginally improved but still less than the agricultural sector. In 1983-84 the agriculture has contributed 43.0 per cent in total NDP whereas during the same period the industry contirbuted merely 9.9 per cent. It indicates quite clearly that in the process of structural transformation of Bihar's economy the contributory role of industrialisation has not been quite satisfactory. State Domestic Product which is an accepted index of industrialisation has always been lowest in comparison to other states. In Bihar only 15 per cent of SDP comes from industrial sector. At current prices the share was 11.34 per cent in 1975-76. Even from the point of view of providing employment to people, the contribution of industrial sector is minimal. Nearly 5 per cent of total employment in the state is generated in the industrial sector.

However, the situation is even worse if one compares the district level data. Out of 31 districts, 21 have been declared as industrially backward districts by the Central Government. Out of three geographical regions of the state, only the districts of Chhotanagpur plateau region with rich mineral reserves have comparative advantage in terms of indicators of industrial development. But in comparison to national index, their position also is not satisfactory.

Unimpressive industrial growth

So far as the programme of industrialisation in Bihar is concerned, the Plan document itself states that 'though Bihar is rich in mineral and other natural resources and the potential for rapid industrial growth is enormous due to a combination of various circumstances, the growth of this sector has not been striking and the state has not achieved the desired levels of industrialisation.

The industrial policy of the state is to assist and promote industrial entrepreneurs in the private sector by providing the necessary basic infrastructure, financial incentives and other concessions, thereby creating an environment wherein "take off would be possible". But in the last few decades of industrialisation there has been no evidence of any kind of take-off. The Plan document clearly admits, "In the recent past, considerable investments have no doubt been made on steel plants, heavy engineering, mining activities, fertilisers and petroleum industries, but they have had very little spread effect".

Such a wide variation in the level of development of regions of Bihar is due to the fact that the importance of balanced regional development has never been recognised and therefore, no specific attention was given to it in the Five Year Plans. Although at the national level, widening of inter-state disparities attracted the attention of planners at the time of the formulation of Second Five Year Plan, no positive actions were taken till the formulation of the Fourth Five Year Plan It was the Fourth Five Year Plan which took note of these imbalances and conceived of the allocation of Central assistance and the promotion of industries as the major instruments for narrowing down the disparities in Bihar. The first step in the direction of finding concrete solution to the problem of regional imbalances and inter-districts imbalances was taken up at the beginning of the Sixth Five Year Plan by establishing district Planning Committees. Although the Planning Commission during the formulation stage of the Fourth Five Year Plan had recommended district as a unit of planning with a view to correcting regional imbalances. In fact, the district planning was considered to be the corner stone of the strategy for reducing regional disparties and overcoming the problem of backwardness. Accordingly, the village plans, block plans nad district plans were sought to be prepared which were to be

integrated to the State Plan. However, in the absence of adequate and competent evaluation of the physical resources available in different parts of the state, proper identification of strategies and priorities, competent planning guidance and a clearcut exposition of resource constraints, the planning from below turned out to be merely a statement of felt needs.

Sectoral planning

The planning system of the State is quite fragmented and sectoral without any consideration of development potentials or sequencing of priorities at a particular stage of development of an area. It is time when the policy makers and the planners should come forward to optimize the overall growth rate by taking appropriate measures on the basis of the scope for functional specialisation provided by regional|district variations in resource endowments, infrastructure and agro-climatic conditions-They should also think to develop sequential location specific strategies for maximum utilisation of local potential to help reduce the existing disparities.

Regional planning needed

For the balanced economic development of the State what is most needed is a programme of regional planning. Regional planning strategy will make it possible to explore whether and how regional integration of interrelated sectoral developments could enhance the total effectiveness of the environment. Such a strategy will help understand whether and how the organisation and judicious use of the known and potential regional resources could contribute to national development. The regional planning strategy has yet to take its roots in Bihar. The plan prepared at the district level has been more in the nature of compilation of sectoral programmes without giving due attention to spatial dimensions. As a result planning has left little impact on the people.

The problem of regional imbalances in Bihar has several dimensions and therefore a multi-dimensional strategy must be prepared to find a solution.

A balanced regional development implies the optimum development of the potentialities of an area. There should be separate development programme for each region after a region-wise techno-economic survey.

For instance, in the backward regions of North Bihar, characterised by stagnating agriculture and deprived of mineral resources, the development programme should spread from the technological breakthrough in agriculture and water managements, including flood control, improvement of transport and communication and social institutional reforms.

On the other hand, in famine prone areas which have severe environmental handicaps and limited development potential, local youth should be trained for emigration to adjoining regions of better economic opportunities where projects for the development of natural resources can be started.

Some regions, predominated by tribals or some other weaker sections of society, should be indentified for special types of economic programme.

Fill inter-district gaps!

The State Government should formulate a comprehensive strategy to tackle the problem of inter-district imbalances. One aspect of this strategy would definitely focuss on the planning— a multilevel planning framework, taking district as the basic unit of planning. The other aspect would consider the various socio-economic and institutional changes required to be made in agriculture, industry and service sectors of the state. As a result of the implementation of this comprehensive strategy, gains of economic development may trickle down to the poorest of the poor and the most distant and backward areas. In fact, it is now firmly believed that for the amelioration of poverty, unemployment and other problems and removal of regional imbalances, the multi-dimensional strategy is required which would provide a sudden and definite 'big push' to the standstill economy of Bihar. □□□

Coastal water quality monitoring

The Central Board for Prevention and Control of Water Pollution in association with the State Control Boards and some other agencies is undertaking a Coastal Pollution Survey covering the entire coastal line of India. The survey, to last till the end of the Seventh Five Year Plan has already been started by the Gujarat and Tamilnadu State Control Boards covering the entire stretch of the coastal line falling within their states with effect from October 1987.

Already 173 pollution monitoring stations along the 5,697 Km. coastal line have been set up, of which 107 are to be operated by the four State Control Boards i.e. Gujarat(20), Maharashtra(20), Kerala(8) and Tamilnadu(35) as well as the East-North Eastern Regional Office of the Central Board (24) Rest of the 66 monitoring stations are to be operated by the National Institute of Oceanography (NIO), Mangalore Fisheries College, Institute of Preventive Medicine (Hyderabad) and Zonal Office of NIO, Vishakhapatnam.

NIO, Goa besides playing advisory role is also to act as overall coordinator for the project, whereas the Central Board is to coordinate monitoring activities and to publish the final report. The Department of Ocean Development and Ministry of Environment and Forests are to be the nodal agencies.

The survey is to identify the sources of pollution along the coast line and to undertake use-based classification and zoning of the coast based on the preliminary surveys locations for the 173 monitoring stations for water quality monitoring were decided. □

What will help alleviate poverty

Amarendra Prasad Singh

In spite of Seven Five Year plans and several other specially designed programmes, poverty still persists in India on a mass scale. In this article, the author analyses the various causes for the persistent poverty and points out that economic, social and political factors have conspired to perpetuate it. Decentralisation of economic, social and political power, says the author, is a must in the fight against poverty.

ONE OF THE FUNDAMENTAL OBJECTIVES of planning in India has been to raise the standard of living of people and to remove the appalling poverty of masses. During the last three and a half decades several anti-poverty programmes or schemes have been initiated for the upliftment of the weaker sections of society in India. Actually it was Fourth Five Year Plan which for the first time laid emphasis on the 'common man' and the 'less privileged'. For the benefit of the less privileged classes it adopted several programmes such as SFDA or MFAL etc. In the Fifth Five Year Plan the objective of 'removal of poverty' was given categorical statement. At present also there are several programmes, like IRDP, NREP, RLEGP, TRYSEM etc., especially designed to tackle the problem of poverty. In spite of all these efforts poverty still persists in India, 37 per cent of Indian population are still living below the poverty line.

Time and again a number of theories have been put forth to explain the causes of persisting poverty in India. The causes range from economical and demographic factors to political and social factors. Following are the some important causes of persisting poverty in India.

Failure of percolation theory

Failure of percolation theory is one of the most important cause of persisting poverty in India. As a closely related measure, accelerating economic growth over the long run provides a fundamental approach to eroding poverty. The essential theme of development has been the elimination of poverty, social inequality and unemployment. These have been national goals focussed largely on economic growth in the belief that an increase in the Gross National Product will percolate down to the poorest and thereby eliminate poverty, inequality and unemployment in the country. The simple equation seemed to be that since low income and wealth meant poverty, higher income and wealth should result in prosperity and that if the nation becomes rich all people will ipso facto cease to be poor.

In India the percolation theory gained momentum after the independence, because it was generally believed that the greater the growth rate the larger would generally be the employment opportunities which would help in removal of poverty. The data

in respect of the growth rates during the different Five Year Plans are given in the Table 1.1.

TABLE 1.1

Growth Rates (Actual and Targets) of National Income and per capita income

(percentage

Plan	National Income (Target)	National Income (Actual)	Per capita) Income
First Plan	2.1	3.6	1.7
Second Plan	4.2	4.0	2.0
Third Plan	5.6	2.2	—0.9
Three Annual Plans (1966—69)	...	4.0	1.8
Fourth Plan	5.7	3.3	1.1
Fifth Plan	4.4	5.2	2.9
Sixth Plan*	5.2	5.2	3.0

SOURCE : Sixth Five Year Plan, 1980—85, Govt. of India Planning Commission P. 1.

*Competition Success Review, Annual 19 86, P. 73.

For a country which is in the middle of the Seventh Five Year Plan, there is enough experience to assess the impact of development on poverty. In fact this figure (given in Table 1.1) is highly misleading as evidence of our progress in overcoming poverty. An expansion of the national income is meaningless if it does not provide, "the masses of Indian people with a good life" the avowed objective of planning in India. By now it is not only admitted by well known authors but even by our policy makers and the planner themselves that with all our development plans, there has been little amelioration of the condition of mass poverty.

Absence of trickle down

Absence of trickle-down is the main weakness of the percolation theory. It is realised that the great hopes pinned on 'GNPism' strategy has failed. Though the GNP increased, this increase failed to trickle down and consequently most of the development activities by-passed the really poor in the country. The percolation theory has failed to narrow the gap between the rich and poor. An indication of the distance separating the rich from the poor in India, can be had from the fact that in 1967-68, while the private consumption expenditure of the bottom 5 per cent people was Rs 78 at 1960-61 prices, it was Rs. 1350 for the top 5 per cent of the population. A similar pattern continues to exist for 1973-74. It has been estimated by the noted economist, B.S. Minhas that the average per capita consumption expenditure of 5 per cent at the bottom comes to be Rs. 88 at 1960-61 prices and for the 5 per cent at the top it is Rs. 932.

Percolation theory is essentially a camouflage for the capitalist approach to plans. So far as the problem of removal of poverty is concerned, it only beats about the bush without tackling the problem directly. Experience in different parts of the world has shown that unemployment and poverty can continue to rise in spite of economic growth. P. C. Joshi, a well known economist, establishes a clear cut distinction between the theory of development and the theory of elimination of poverty. This, he says has been amply proved in the case of green revolution, which no doubt, brought development in some states, but did not mitigate poverty in those areas. In India percolation theory has failed to narrow the gap between poor and rich and eliminate poverty and unempolyment.

Unemployment

Unemployment is another but most important cause of persisting poverty in India. Poverty is yet another name for unemployment. Unemployment is described as a 'manifestation of poverty, and is a major cause of poverty. An ILO publication which regards a rapid transfer of population from the low productivity traditional sector to the high productivity modern sector as one of the chief tasks of economic development, sees in it 'the only means of of escape from poverty in the developing countries.' Dandekar and Rath visualise a strong association between poverty and unemployment. In India the poverty of atleast 30 per cent of the rural population is attributed by Dandekar and Rath to lack of adequate employment for its working members.

In India an emphasis on creation of employment opportunities has been placed in each of the Five Year Plans. In spite of these efforts, the problem of unemployment could not be solved. The additional employment generated during the period of planning has fallen considerably short of the overall demand for employment opportunities owing to growth of population, migration from rural to urban areas and development of education. That is why the backlog of unemployment has increased from plan to plan. At the end of the Sixth Five Year Plan in India about 303.3 million people were unemplyoed. Annual growth rate of labour force works out to 2.41 per cent which is almost the rate of increase of the population. The situation of unemployment is mainly responsible for the persisting poverty in India.

Slow implementation of land reforms measures

Slow implementation of land reform measures is another important cause of persisting poverty in India. It is well known that the rural poor can not raise their productivity and income unless they have proper access to land and complementary resources. The importance of land reforms in the field of poverty eradication is very high because land re-

forms increase the economic and social status of the rural poor. Land is a source of prestige and social identity and not merely a means of livelihood. Land reforms are essential to bring about socio-economic equality in the rural areas. They are also needed for increasing incentives and efficiency in agriculture. Many economists also suggest that the speedy and proper implementation of land reform measures is the only way to eradicate poverty from India. As for example, David Thorner, a well known economist, is in favour of radical land reform measures to overcome the problem of poverty in India. While discussing the policy alternatives for rural development in India, Gunnar Myrdal has considered the need for such an approach He observes 'besides generally raising labour utilisation and production, a radical distribution could, perhaps, also gradually influence cultivators to respond more positively to price incentives.'

At present in rural India land is heavily concentrated in few hands. Implementation of land reform measures is slow and defective in India. Legislation providing for ceiling on land holdings has been passed in all states. Ceiling was brought into force in the 50's and 60's and later, revised lower ceilings have been fixed by the states after a concensus was arrived at and the national guidelines were issued in 1972. In India the pace of taking possession of surplus land and distributing it among the landless has not been satisfactory. The land redistribution programme has not been accompanied by effective measures to upgrade the conditions of production and correct the low productivity of the land allotted. There is still a large gap between the area which has been taken under possession and the area actually distributed In spite of land ceiling, an equitable distribution of land could not be achieved. After the end of the Sixth Plan, over 7.2 million acres of land had been declared surplus. 56 million acres had been taken possession of and 44 million acres distributed Thus 2.8 million acres of land declared surplus had not been distributed.

Abolition of intermediaries has been substantially implemented in India About 25 million cultivators have been brought into direct contact with the state. But the formal abolition of intermediary rights does not in all cases bring appreciable relief to the cultivators unless he is in a position to pay compensation fixed by law for the acquisition of land. He has now to pay the same rent only to a different person, the state.

Regarding tenancy reform while several states have scaled down the rents chargeable, in a number of states the maximum fixed is still higher than 1/4 to 1/5th of gross produce recommended by the Planning Commission Also legal provisions regarding the fixation of rent have not been effectively enforced. While provisions regarding security of tenure have been enacted in several states, yet large scale ejections of tenants continue in many states under one or the other pretext. Informal and disguised tenancy continues under which the landlord considers it unwise to invest in the improvement of land while tenant is unable or reluctant to invest even in inputs like fertilisers.

The work of consolidation of holdings too has made progress only in a few states. While in Punjab and Haryana consolidation operations have been completed, in U.P. two thirds of the land has been consolidated, other states are lagging behind.

Thus we observe that the pace of implementation of reform measures has been slow. There are many other shortcomings also in the implementation of land reform measures. Planning Commission has also admitted that —"there are many gaps between objectives and legislation and between the laws and their implementation" and that "there have been shortcomings in implementation and the progress has been slow in many states."

Limited success of anti-poverty programmes

During the last three and half decades several anti-poverty programmes like Community Development Programme, IADP, SFDA, MFALDA, Antyodaya, Food for Work Programme, IRDP, NREP, RLEGP, TRYSEM etc. have been initiated for the eradication of poverty. All these anti-poverty programmes have achieved only limited success in the field of poverty eradication.

Limited success of earlier programmes

All the earlier anti-poverty programmes like Community Development Programme, SFDA, MFALDA, Antyodaya, Food for Work Progamrme etc. had achieved limited success in the field of poverty eradication. These programmes achieved limited success not due to financial constraints but as a result of the absence of clear cut planned approach to the development of the rural poor as an inbuilt process in the development of the area and its resources. The approaches for these programmes were selective, sporadic, piecemeal and sectoral in nature. Thus they produced only a marginal impact on the rural life and would not lead to the balanced and overall development of rural areas. They have caused spatial and sectoral influences in the growth of economy The desired results of earlier anti-poverty programmes were not available due to multiplicity of programmes overlapping and unintegrated approach of agencies handling these programmes. The desired results were also not available due to the wrong identification of beneficiaries.

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Limited success of present programmes

All the present anti-poverty programmes like IRDP, NREP, RLEGP etc. also have achieved limited success in the field of poverty eradication.

IRDP may be successful in terms of number of households benefited in terms of per capita household investment, but as various case studies reveal, it has failed to achieve the main goal, i.e. lifting the poor people above poverty line, though some increases in income were experienced.

Employment generation target under the NREP and RLEGP has been consistently achieved. However it is not known as to how much of this has been directed towards those who are landless and poorest among the poor. To this extent both these programmes have apparently lacked a direct focus on the target group for whom it was meant.

The desired results of present anti-poverty programme, mainly IRDP, are not available due to many problems. They are (i) improper identification of beneficiaries (ii) rampant corruption among bureaucratic cadres (iii) overlapping and unintegrated approach of agencies handling these programmes (iv) bias towards animal husbandry (v) administrative weaknesses (vi) inadequacy of banking infrastructure (vii) absence of backward and forward linkages (viii) absence of people's active participation (ix) lack of co-ordination among various schemes (x) inadequate monitoring and evaluation of the programmes etc.

Over population

Over population is also a main cause of persisting poverty in India. Over population and the state of chronic cumulative poverty go hand in hand. This is the famous 'Malthusian trap'. Malthus held that uncontrolled population growth was the principal cause of mass poverty. Rapid increase in population continually adds to the army of the unemployed and the poor.

Indian poverty is the product of the country's failures to generate economic progress at a rate faster than the rate at which its population has grown. Demographers like Kingsley, Davis, Chandrashekhar and others have concluded that the alarming rate of population growth in India has been the main cause of persisting poverty in India.

Tracing the trends of population growth in India, demographers have observed that population did not pose such a great threat in India before 1921-31 decade, when the birth rate and death rate, being almost equal, neutralised the effect of one another. But in 1921, the scene changed and population strode on the stage like a malevolent villain. The decade of 1921-31, which has been rightly described as the decade of great divide witnessed a phenomenal growth of population due to the fact that epidemic diseases like cholera, plague, influenza and malaria which used to take heavy toll were checked. As a result, there was an unprecedented growth of population in India. The magnitude of this growth could be seen by making a comparative assessment. During the 30 years, prior to 1921, that is during the period 1891 to 1921, the population increased approximately by 14.7 million, whereas during the 30 years after 1921, that is during the period 1921-51, the population increased by 109.7 million. That means the population of India increased nearly 8 times during the 30 years after 1921. Since the fatal decade of 1921-31; the growth of India's population has continued unabated. If the decade of 1921-31, was the decade of great divide, then the decade of 1951-61 which recorded a phenomenal growth rate of 2.2 per cent per annum and reached the size of 439.2 million, was the decade of great leap forward. According to 1971 census findings, our population increased at the rate of 2.57 per annum during 1961-71 and reached the size of 548 million. This trend of phenomenal growth continued and the decade of 1971-81 registered the all time record of 683.8 million, at the growth rate of 2.5 per cent per annum, shattering all prophecies and projections.

Almost all the demographers who have studied the dynamics of India's population have concluded that India is deep in the population crisis predicted by Malthus and that the poverty, starvation and death are only the symptoms of this demographic crisis. Hence they predict that unless India sets her demographic house in order by checking the growth of population all the effects, towards economic development would be as futile as trying to construct a bridge in a swift flowing river.

Politico-economic reason

Many economists have given the politico-economic reasons for the poverty stricken conditions of India. They hold the view that politico-economic reason is the main cause of the persisting poverty in India.

Gunnar Myrdal's theory of soft-state provides a political angle to look at the problem of poverty in India. Like many other developing countries of South East Asia, India has a soft state "comprising of various types of social indiscipline which manifest themselves by deficiencies in legislation, and in particular, low observance and enforcement, a widespread disobedience by public officials on various levels to rules and directives handed down to them, and often their collusion with powerful persons and groups of persons whose conduct they should regulate. Elaborating about the concept of soft state, Myrdal observes that softness of the state is not due to any inherent evil characteristics of the

people of India, but is the cumulative result of a long historical evolution in which economic, social and political factors have played their role. The main reason for this was colonialism which destroyed ancient village organisations without creating a viable substitute. Instead, the authoritarian tradition of pre-colonial times, was rather, strengthened by the colonial rule and transformed into paternalism. In such a paternalistic system, people become accustomed to being ordered about and also to getting away with as much as they could.

Another unfortunate fallout of colonial rule in India was the weapon that the Indian leaders used to fight the foreign rulers. Enlightened leaders like Gandhi and Nehru used disobedience and non-cooperation as the political tools. But after the attainment of independence these tools are used to generate attitudes of lawlessness and anarchy among the ignorant masses without scruples. Thus the noble ideals of non-cooperation and disobedience have left a legacy of anarchic attitudes which are turned against the indigenous governments. Yet another factor that softened the state in India was the failure of the general mass to use their suffrage effectively.

After the analysis of the sad state of affairs, Myrdal throws a hint that the only way to set things right is for the masses to launch a struggle on a broad front to make the state less soft. Also quoting the dictum of the American Jurist Learned Hand that "Law is violence" he pleads that a better way to teach discipline to an indisciplined nation is to rely more on stick than on carrot.

Social factors

Many social factors are also responsible for the persisting poverty in India. Economic development is not merely a matter of economic resources, it also depends on urges, attitudes and aspirations of the people. Indian people lack initiative and resourcefulness. They are fatalists by conviction. The caste system and the joint family system and the laws of inheritence are a great obstacle to economic progress. Just as India is poor in economic overheads, she is also poor in social overheads like education, public health and medical facilities. Thus, Indian socil institutions and attitudes hamper economic progress and are responsible for prepetuating poverty.

Conclusion

Thus all factors, economic, social and political have conspired to perpetuate poverty in India. There is poverty because of concentration of economic, social and political power in the hands of the upper strata of society. They are so strongly entrenched that they will not let anything happen which may touch their pockets. But unless they are touched, the poor can not be uplifted, because the resources are limited. Thus the fight against poverty is the fight against exploitation by those who are the principal beneficiaries of growth. □ □ □

New ignition system for boilers to save Rs. 40 crore

Foreign exchange worth Rs. 40 crores will be saved every year with the installation of a new ignition system being provided by BHEL for some of its 210 MW boilers. Orders for 7 such systems are under execution.

Designed to prevent excessive use of imported fuel oil for starting of boilers and low load stabilisation, this system will be installed in 210 MW boilers at Satpura in Madhya Pradesh, Vijayawada in Andhra Pradesh and Mejia in West Bengal. The system developed by BHEL ignites pulverised coal directly without the need to gasify it during boiler start-up.

He mentioned that BHEL had developed several new technologies for efficient burning of poor quality coals available in India. The erosion of boiler components due to high ash content in Indian coals had been overcome by making special modifications in boiler design. □

What is a women's enterprise

An enterprise owned and administered by a woman entrepreneur having a minimum financial interest of 51 per cent of the share capital and giving at least 50 per cent of the employment generated in the enterprise to women will now be considered as an enterprise run by women. With the adoption of this definition it is hoped that special schemes will be formulated to further entrepreneurship among the women. Women entrepreneurs will now have distinct identity so that their interests are fully protected and promoted by the Government, financial institutions and other agencies. □

Industries in backward areas

Government has taken a large number of measures to encourage industrial development of the centrally declared backward areas. Measures included delicensing of certain industries and reduction in export obligation in respect of companies falling within the purview of MRTP Act and FERA for location in centrally declared backward areas. This was stated by the Minister of State for Industrial Development, Shri M. Arunachalam in the Lok Sabha on November 24, 1987. □

Let rural poor beware of their rights

—T. J. Sreeraman

Progress, says the author, is not going urban but bringing development to the rural poor. The innovative credit schemes and the "Organisation of beneficiaries of anti-poverty programmes" have enabled the rural poor to increase employment and income as also to generate greater awareness of their rights. These and other rural development programmes are effective instruments in combating poverty.

Indira Gandhi, our late Prime Minister, one of the greatest ever champions of the downtrodden had this to say even as she was giving her very best to build and consolidate the base laid by Pandit Jawaharlal Nehru our first Prime Minister to fight poverty, "India lives in her villages". Our progress therefore depends on the extent to which we can overcome the poverty and neglect of our rural folk. The yogi of the plough and potter's wheel must be enabled to feel proud in his craft and live with dignity".

Even after all our concerted efforts for the last 40 years, poverty of our rural masses is a grim fact and a matter of great concern than ever before. Even if they are not poorer than in the past, their number has grown and they are more conscious of their poverty. The most important consequence of the widening dimension of rural poverty is the distress or 'push' migration of rural poor to the towns in search of livelihood and employment. This problem is now assuming gargantuan proportions and unless significant improvement in the living conditions of the rural population is made, we have a potential time bomb on our hands.

Poverty alleviation programmes

It is keeping all this in view that the programmes for the development of rural masses are chalked out. The country can develop economically only when the rural areas develop side by side and the masses who live there are raised above the poverty line so that their purchasing power could be strengthened. For this the important factor is generation of additional income in the rural areas and creation of employment in these areas, which means the transferring of productive assets and other supportive facilities to the rural areas.

The Union Government and the State Governments have extended a number of concessions and reliefs to all those who wish to start industries in the rural areas. And here again the need is intrastructural facilities and the Government is slowly creating the facilities by providing roads and other communication facilities to connect the rural areas with consumer centres and other market centres. In fact the cheap labour available in the rural areas is being used for creating these facilities. Wages for these are partly given in the form of foodgrains and the rest in cash.

The Government has appointed a number of committees to assess the rural poverty and also to find out ways to improve the lot of the poor. A study

conducted at Laliput district of Uttar Pradesh revealed that 71 per cent of the beneficiaries had an increase in employment opportunities. But unfortunately the overall recovery performance was not satisfactory which stood at 39 per cent. The main objectives of the study were to evaluate the impact of the poverty alleviation programmes on income, employment and assets, to assess the effectiveness of programme implementation, to identify the difficulties experienced in the smooth implementation of the programme and to suggest corrective measures.

Role of banks

Banks have a very vital role to play in this area. Previously, for the assetless poor in the rural areas, the prospects of managing a loan from the orthodox banking institutions was a very distant idea. The alternative was to borrow from the infamous money lenders at outrageous interest rates and in the process getting condemned as bonded labourers It was realising this fact that Smt. Indira Gandhi nationalised the then 14 major banks and made available loans to the weaker sections of the society at low rates of interest. The Government later on arranged a number of olan melas and distributed loans to the poor peasants and artisans for their welfare and development Banks of course had their problems in the beginning in making proper compromise between rules and regulations and the absolute development of the would be beneficiaries. However many of these problems were circumvented by the authorities by taking steps like allotting land to the landless for the process of hypothetication

ILO praises India

Now more and more developing countries are following this example An International Labour Organisation (ILO) press release put out in November 1986, stated that many developing countries anxious to alleviate rural poverty have lately launched innovative credit programmes, which have revolutionised lending policies, removing the traditional collateral requirements for loans. The ILO press release had singled out India for praise and said that in countries like India, Bangladesh, Nepal and Zimbabwe, the credit schemes have helped tens of thousands of poor to secure loans to finance some of income generating activity

An ILO expert Philippe Egger, writing in the International Labour Review also noted that their payment records of these programmes are well above the average of traditional credit programmes. According to him, "Credit, under the right conditions, could enable the poor to increase their employment and income and is thus an effective instrument for combating poverty".

Another side of the picture is that there had been tremendous improvement in the position of the repayment of loans. The beneficiaries even from the illiterate sections are now fully aware of the need to make timely repayment of loans and establish credibility for their own interest.

The increasing awareness

To Union Government has already approved for implementation a scheme for "organisation of beneficiaries of anti-poverty programmes". The scheme aims at generating awareness among the rural poor regarding poverty alleviation programmes and other related matters with the objective of making them understand their rights and power of collective action to get their due. The formulation of the scheme is the outcome of a widespread belief as well as exprerience of those implementing anti-poverty programmes that lack of bargaining power among the beneficiaries and their poor understanding severly inhibited the flow of benefits to them. The scheme envisages organisation of 'awareness generation camps' followed by regular contacts till they themselves emerge as a powerful vocal group capable of looking after their interests.

Voluntary agencies will be entrusted with the implementation of the scheme. The Council for Advancement of People's Action and Rural Technology (CAPART) at the central level would administer the scheme on behalf of the Government of India. The guidelines for the implementation of the scheme has been finalised. The Union Secretary for Rural Development has already sent letters to the Chief Secretaries of the State asking them to issue suitable instructions to provide necessary assistance to the implementing agencies and groups.

The scheme is to be implemented initially on a pilot basis for two years with a financial outlay of Rs. 2 crore. An amount of Rs. 1.45 crore has already been released to CAPART for the current year A committee at the national level has been constituted to oversee the implementation of the scheme, monitor its progress and to suggest improvements when necessary.

Seventh plan assistance

During the Seventh Plan (1985—90), it is proposed to assist 20 million families under the Integrated Rural Development Programme (IRDP) including the old families assisted in the Sixth Plan, who were unable to cross the poverty line. The tentative total outlay for this programme is Rs. 2308.81 crore out of which the envisaged central share is Rs. 1186 crore. Besides, institutional credit of the order of Rs. 4,000 crore is expected to be mobilised. Annual targets are fixed on a year to year basis. Tentative outlay for the year 1987-88 has been finalised recently.

According to the Seventh Five Year Plan document an amount of Rs. 6174.90 crore was provided for rural development programme.

(Contd. on page 27)

Agrarian reforms : a historical analysis

Deep Sagar

The article is a study of the various schools of agrarian reforms. The results of agrarian reforms, the impact of these reforms in various countries and their success or failures are analysed in detail. The author concludes saying that no school of reform is fool-proof. Success or failure depends on the availability of conducive conditions.

AGRARIAN REFORM HAS BEEN CHARACTERISED by three main schools of thought : the productionist or technological school, the gradualist or distributionary school, and the radical or revolutionary school. The productionist policies-set is mainly concerned with increases in output and thus concentrates on technological reform (e.g., the Green Revolution) normally using large farms as the resource base. The gradualist set of policies is based on peaceful processes of reform within the existing legal structure. It attempts to achieve increases in production with a better distribution of land resources and uses instruments like land ceilings, tenancy reform and rent reduction. Radical policy on the other hand attempts to transform the socio-economic base of society, sometimes even the moral, emphasising equitable distribution of benefits. It is frequently accompanied by political upheavals and may change the economic system to community ownership

Products of agrarian reform

There are three broad and commonly accepted intended products · (i) increase in production and productivity—the economic criterion, (ii) equitability in the distribution of economic benefits of land, and (iii) a better distribution of social and economic power. However there is arguably a fourth objective . the political gain to the state out of announcing or undertaking reform

Overview

A surface view suggests the following. Any agrarian reform under gradualist policies would bring forth smaller units of farming with a clear segregation of the beneficiaries from the dispossessed. The economic consequence of this is unproven and is difficult to foresee : On the one hand it would be tough for non-cultivators to reproduce earlier output levels in the short-run and on the other would be the benefits from owner-cultivation. The social and political consequences are clearer : the beneficiaries would be saddled with potentially great power but it is difficult to say if they would be able to manage it ; the dispossessed would emerge with great hostility towards the other group and (while neglecting own production) may force a conflict. Obviously, with gradualist policies, the role of the state would be the deciding factor—whether it would have a good enough plan and would be able to sustain it Instinctively, therefore, one inclines towards the success of radical policies since the state by definition would be the leading actor in a radical overturn. There is also a theoretical problem with gradualist policies in that the reform may need to be repeated periodically since the legal, and most-importantly, the socio-

economic structure including the market would again un the agrarian structure of relations.

The historical evidence

Gradualist policies have failed, by and large, in the Indian sub-continent. There has been virtually no effect on production, equity or socio-political relations. Although in India the elimination of zamindars and other intermediaries was a major reform, a weak state, weak policies and poor implementation are accepted to be the major factors. In Latin America the tenancy legislation has not succeeded, though the imposition of land ceilings has been more effective. Redistribution of land has failed to a large degree. The ceiling legislation was attempted for farm efficiency rather than for equitable redistribution (Colombia, Venezuela, Chile) but where redistribution was stressed better results came through—Peru after 1969 and Chile in the 1970's. Settlement on public lands has of course worked to an extent. In the Middle-East the gradualist reforms in Egypt in 1969 were not successful. After the ceiling and tenancy regulations the landless remained 50 per cent of total in 1972. The reforms in Iraq and Syria in 1958 were also failures. The South Asian failures have been mentioned above, but a startling success in Asia was the 1953 reform in South Korea and a similar story was earlier registered in Japan.

What about radical policies? In Latin America, Peru, Chile and Mexico attempted conversion to cooperatives but with little success. Iran's attempt to forcibly modernise agriculture in the Middle-East failed miserably. The reform destroyed the rural fabric, promoted production inefficiency, encouraged waste, worsened income inequalities and forced large-scale urban migration. In Africa, some success on the equity front was achieved by Ethiopia and Nicaragua. Algeria's radical reform after independence included cooperativisation, abolition of absentee landlordism, land ceiling legislation and grant of surplus to the landless. It had a very beneficial impact on land rights but mixed evidence on production increases exists. In Asia, India attempted limited cooperativisation but failed like the experience of the well-known ujamaas in Tanzania. Reforms in Taiwan must be categorised as radical because of the fierce nature of the changes involved. Perhaps the success of those reforms has been directly proportional to the great upheavals involved. The evidence on the experiences with collective systems by China and the USSR is unclear, but definitely the equity and equitability in socio-political power criteria have been met there. Only the production increases are attributed more to technological reforms.

Our conclusion from this brief survey must be: neither gradualist nor radical policies have clearly brought about quantum leaps in outputs, but radical policies have more often achieved the equity—political, social and economic—criteria. Frequently, however, both radical and gradualist policies may be seen to have achieved only a political end for the state. It is doubtful if an assertion about the relative superiority of any one of the alternative policies can be made.

Necessary and sufficient variables

Before tracing these variables it may be useful to quote Michael Lipton and Herring on gradualist policies to remind ourselves that most of the critical variables may be more likely in radical policies." In general, tenancy reform in the 'soft states' of the Third World breaks upon the rock of landlord power, and the effects of evasion can include insecurity that worsens both rural income distribution and the standards of capital and land acquisition and maintenance of tenant farms" (Lipton). Herring says, "Practically, limited tenurial reform should work compared to fundamental sweeping reforms. Yet, empirically, tenure reform in the South Asian context proved unable to accomplish even its limited goals and has indeed often harmed rather than helped the tenants it claims to protect..... Institutional arrangements for achieving the ends of the (gradualist) model are severely constrained by the normative assessment that the landlord's proprietary rights in land should be preserved. If so, the state must intervene to regulate contracts ...or expect voluntary compliance.....the model assumes that tenants will demand their rights which is not likely". After having painted this grim picture of the state landlord interests dynamics in a gradualist model one must acknowledge the practical difficulties, despite good theoretical arguments for radical cooperatives or collectives, of forming a creative administration, a corps of committed cadres and overcoming the social, cultural, class and linguistic barriers between the poorest farmer and the official.

Ghose argues that the most critical variables are: the circumstances under which the refrom is attempted (Ethiopia and Nicaragua), the organisation of potential beneficiaries (West Bengal) and the thrust towards a new political structure. King rates the importance of intelligence of carrying out the reform and the conditions sorrounding the reform highly: Japan, Taiwan and Italy "managed" their reforms well. Herring stresses the need for clear conceptualisation and even clearer autonomous implementation.

Conclusion

One thing, or rather two things, we can clearly say. First, radical or gradualist policies may not produce a quantum jump in production or productivity; technological policies may be needed also. Second, both gradualist and radical policies may achieve political mileage for the regime and frequently do so. As to equity in distribution of social, political and economic benefits there is conflicting evidence for both the policies. Our analysis shows that it is

(*Continued on page 27*)

U.P. hill areas require a better deal

—Chandra Ballabh

The author points out that the population growth in the hill districts of U.P. is a major constraint to their development. He makes an analytical study into population behaviour of Kumaun and Garhwal divisions comprising eight districts. Prevalence of illiteracy, lack of job opportunities, overburdened agricultural land, use of outdated techniques in farming, says the author, are highly responsible for the under development of these areas. Higher level of education and establishment of labour intensive industries (to check out-migration), can go a long way towards the solution of the problem in his opinion.

THE HILLY AREAS IN THE COUNTRY in general and those in Uttar Pradesh in particular are backward and poverty-ridden The general standard of living of the people there is very low both in absolute terms and relatively to that in other parts of the country. A very high percentage of population in this region is engaged in agricultural activity which is carried on a traditional basis, using primitive technology and relying on unpredictable rainfall. The use of new, advanced agricultural technology is conspicuous by its absence in this region. As a matter of fact, this new technology is simply not applicable|suitable for agricultural operations in this region, if for no reason other than that it was not evolved specifically to this end Thus, while mechanization, especially, tractorization, is not possible, the use of fertilizer, in the absence of irrigation facilities, is simply irrelevant. Industrially too the region is marked by backwardness. Lack of capital, skill and market facilities have obstructed the coming up of industries. In the absence of adequate industrial activity and corresponding job opportunities, people are forced to stay on and|or engage in an already overburdened and weak agriculture which results in disguised unemployment in the traditional agricultural sector The only alternative is outmigration But the outmigrants do not always get sufficiently remunerative jobs and, consequently, remittances back home, which could have to some extent mitigated the poverty conditions of the region, too have been negligible

Population growth, a constraint

However, while all these factors have been responsible for the backwardness and slow economic growth of the region, population growth too may be said to have constituted an important constraint in this respect. Wicksell's words that poverty itself was caused by over-population would seem to be very true of this region.

The purpose of this paper is to focus attention on the population constraint. To this end, we shall analyse the behaviour of population in this region and related variables during the 20 years period from 1961 to 1981. The data have been taken from the various Census reports. The whole hilly region of

West Uttar Pradesh called 'UTTARAKHAND' consists of two divisions, Kumaun and Garhwal, and of eight districts, namely, Almora, Nainital, Pithoragarh, Chamoli, Pauri-Garhwal, Tehri-Garhwal, Uttarkashi and Dehra Dun. Since the three districts of Chamoli, Uttarkashi and Pithoragarh came into existence only after 1951, data in their case have not been available for 1951. For this reason we have felt constrained to confine our study of the district-wise behaviour of population, etc., to the 1961—81 period.

District-wise population growth

Table 1 shows the population growth in each of the eight districts constituting 'Uttarakhand' for the period from 1961 to 1981. Total population of Uttarakhand which was 30.98 lakh in 1961 increased to 48.15 lakh in 1981 registering an increase of 55.42 per cent, thus giving a growth rate of 2.77 per cent per annum, for the period of 20 years. This growth rate is higher than the one experienced by U.P. during the same period but slightly below the all-India average. At the division level, the population of Kumaun division was 14.67 lakh and that of Garhwal division 16.31 lakh in 1961 which increased to 23.86 lakh and 24.29 lakh respectively in 1981. Thus, the increase in population has been much higher in Kumaun division than in Garhwal division. District-wise, Almora was having the highest population of 6.31 lakhs in 1961 followed by Nainital (5.74 lakh), Pauri-Garhwal (4.79 lakh) and Dehra Dun (4.30 lakh). The population of each of the remaining districts was below 3.50 lakhs. The position in 1981 changed in the sense that Nainital district recorded the highest population of 11.33 lakh followed by Almora (7.73 lakh), Dehra Dun (7.54 lakh) and Pauri-Garhwal (6.24 lakh).

In order to get an idea of the district-wise, division-wise and overall population growth of Uttarakhand, we have prepared the index of population growth for the period 1961—81, and presented it in Table 2. The corresponding figures for U.P. and India are also given in the Table. As may be seen from the Table, Nainital and Pithoragarh experienced markedly high rate of population growth, the index having increased by 97.38 point and 83.21 point respectively, which means that the population of these two districts increased at a rate of 4.86 per cent and 4.16 per cent per annum respectively. On the other hand, the population of Almora district experienced the lowest increase of 1.12 per cent per annum. This enabled the Kumaun division to record an increase of 3.13 per cent per annum in its population. Among the districts falling within the jurisdiction of Garhwal division, Dehra Dun experienced the highest increase in population growth at a rate of 3.76 per cent per annum, followed by Uttarkashi (2.82 per cent), Chamoli (2.19 per cent), Tehri-Garhwal (2.10 per cent) and Pauri-Garhwal (1.51 per cent). Garhwal division as a whole experienced an increase of 2.44 per cent in its population growth. For the Uttarakhand region as a whole, population recorded an increase of 2.77 per cent per annum during the period of 20 years which is above the U.P. level (2.52 per cent per annum). The population growth rates of districts Almora, Pauri-Garhwal, Chamoli and Tehri-Garhwal have been below the U.P. and all-India population growth rates, while in the case of the other four districts, viz., Nainital, Pithoragarh, Uttarkashi and Dehra Dun, population growth rates have been higher than both the U.P. and the all-India population growth rates. Of the two divisions, while Garhwal experienced a below-U.P. and below-India rate of population growth, Kumaun recorded an above-U.P. and above-India rate of growth.

Population behaviour

We shall now analyse the behaviour of population growth experienced during each of the two decades (1961—71 and 1971—81) separately. The relevant figures are given in Table 3. In the case of five districts—Nainital, Pithoragarh, Chamoli, Tehri-Garhwal and Uttarkashi—population growth rate was higher for the second decade as compared to that for the first decade. In the case of the other three districts—Almora, Pauri-Garhwal and Dehra Dun—population growth rate was lower for the second decade as compared to that for the first decade. It is interesting to note that whereas Pithoragarh experienced as high a growth rate as 5.29 per cent per annum, Almora experienced as nominal a growth rate as 0.31 per cent per annum during the second decade. Both the divisions and Uttarakhand taken as a whole experienced higher rate of population growth during the second decade which is in conformity with the trend experienced by U.P and the country as a whole.

Rural-urban ratio

Urbanization is one of the most important socio-economic changes reflecting the nature and extent of economic development. Large-scale urbanization is mainly a product of industrialization. According to Ashish Bose, "economic history of every country reveals a close relationship between industrialization and urbanization." Kingsley Davis expressed the view that "it is not possibel to have industrialization without urbanization". Thus, urbanization is related to industrialization which in turn related to economic development. Table 4 reveals that more than 80 per cent of the population of Uttarakhand lives in rural areas. Dehra Dun has continued to be dominating in terms of urbanization, having an urban population of 1.91 lakh (or 44.42 per cent) in 1961 and 3.73 lakh (or 49.47 per cent) in 1981, an increase of 95.29 per cent during the period of 20 years. Next comes Nainital, with the share of urban population being 19.51 per cent in 1961 and 27.71 per cent in 1981, followed by Pauri-Garhwal with the figures for

1961 and 1981 being 4.8 per cent and 10.42 per cent respectively. In general, all the hilly districts, except Dehra Dun and Nainital, are predominantly rural, having more than 90 per cent rural population, urban population being a negligible fraction of the total in their cases.

Literacy

Literacy is defined as the ability of a person to read and write with 'understanding'. The importance of education in economic development has for long been recognized. Modernization and technological changes that are taking place in agriculture and industry need a high level of literacy among the people. It would, therefore, be relevant here to examine the behaviour of literacy rate in the eight districts of Uttarakhand and compare it with the U.P. and the all-India levels. Table 5 shows the literacy rate for all the eight districts and also for U.P. and all-India, separately for males, females and total population, for the period 1961-81. As is evident from the Table, in 1961, Uttarkashi district was having the lowest literacy rate (15.6 per cent) and Dehra Dun the highest (38.6 per cent). However, in 1981, whereas Dehra Dun continued to occupy the highest place in terms of literacy rate (51.9 per cent), the lowest was that of district Tehri-Garhwal (27.3 per cent). The literacy rate of all the districts except that of Tehri-Garhwal and Uttarkashi, was higher than the literacy rate recorded at the State (U P.) level in 1961. By 1981, the literacy rate of Uttarkashi district came to exceed that of the State while that of Tehri-Garhwal came nearly equal to the State level. Compared with the literacy rate prevailing in the country as a whole, we find that while in 1961 only two districts—Nainital and Dehra Dun—were having higher rate of literacy than at the all-India level, in 1981 only two districts—Uttarkashi and Tehri-Garhwal—showed a below-India literacy rate, all the remaining six districts registered an increase higher than all-India literacy rate There is, however, much variation in the literacy rate of males and females taken separately, in the sense that female literacy is much less than the male literacy. In some districts, the female literacy is as much as 4 to 5 times less than the male literacy.

On the whole, we can say that while the trend in literacy among the males in Uttarakhand compared to the country as a whole has been encouraging, being as high as 60.5 per cent in Dehra Dun, 58.2 per cent in Pauri-Garhwal, 57.6 per cent in Chamoli, 57.4 per cent in Almora, and 56 3 per cent in Pithoragarh compared to the all-India level of 46.71 per cent in 1981, there is no reason to be complacent, and every effort is required to accelerate and speed up literacy in the region. This is particularly so in the case of female literacy; the lack of literacy among the females is alarming, except in the case of Dehra Dun district, where female literacy rate was 41.5 per cent in 1981.

What is needed

Keeping in view the social set up and types of settlement in this region due to its geographical conditions, it is all the more necessary and important that special steps be taken to increase the literacy and level of education, especially among the females, as the higher level of education, particularly among females, tends to slow down the birth rate and thereby population growth. The Adult Education Programme should be conducted on such a line that it helps increase the literacy on the one hand, and, on ther other, the use and benefit of birth control methods are emphasized among the people which would also help in controlling the population growth. In the absence of such an approach, there would be rapid population growth in the mountainous region, which, in turn, would lead to deforestation. This would cause heavy floods as the area's heavy rains would run off rather than get soaked into the soil due to deforestation. Another important point that has to be noted and kept in mind while evolving a economic-cum-demographic policy frame for this region is that of outmigration, especially of male population, from this region which is quite high. This is mainly due to two reasons. One, high rate of population growth, and two, lack of job opportunities There is thus, clearly a need for the establishment of industries in the public sector which uses relatively more labour-intensive techniques and provides jobs to the population in this region.

To be meaningful and effective, any policy measures must take into account all the various facets of the problem—economic, demographic, social, political and cultural. And to do this meaningfully and effectively, what is imperative is the creation of a separate planning unit for the development of hilly areas in the country.

TABLE 1

Population Growth in Uttarakhand : 1961—81
(In '000)

	1961	1971	1981	Percentage increase over 1961
Nainital	574	790	1133	97.38
Almora	631	750	773	22 50
Pithoragarh	262	314	480	83.21
Kumaun Division	1467	1854	2386	62.64
Pauri-Garhwal	479	553	624	30.27
Chamoli	253	293	364	43.87
Tehri-Garhwal	347	397	493	42.07
Uttarkashi	122	148	191	56 56
Dehra Dun	430	577	754	75.34
Garhwal Division	1631	1968	2429	48 92
Uttarakhand	3098	3822	4815	55.42
Uttar Pradesh	73673	88341	110886	50.51
India	439235	548160	685185	56 00

TABLE 2

Index of Population Growth : 1961—81

	1961	1971	1981	Percentage increase per annum
Nainital	100	137.63	197.38	4.86
Almora	100	118.86	122.50	1.12
Pithoragarh	100	119.85	183.21	4.16
Kumaun Division	100	126.38	162.64	3.13
Pauri-Garhwal	100	115.45	130.27	1.51
Chamoli	100	115.81	143.87	2.19
Tehri-Garhwal	100	114.41	142.07	2.10
Uttarkashi	100	121.31	156.56	2.82
Dehra Dun	100	134.18	175.34	3.76
Garhwal Division	100	120.66	148.92	2.44
Uttarakhand	100	123.37	155.42	2.77
Uttar Pradesh	100	119.91	150.51	2.52
India	100	124.80	156.00	2.80

TABLE 3

Decadal Percentage Increase in Population

	1961—71	Percentage increase per annum	1971—81	Percentage increase per annum
Nainital	37.63	3.76	43.42	4.34
Almora	18.86	1.89	3.06	0.31
Pithoragarh	19.85	1.99	52.87	5.29
Kumaun Division	26.38	2.64	28.69	2.87
Pauri-Garhwal	15.45	1.55	12.84	1.28
Chamoli	15.81	1.58	24.23	2.42
Tehri-Garhwal	14.41	1.44	24.18	2.42
Uttarkashi	21.31	2.13	29.05	2.91
Dehra Dun	34.19	3.42	30.68	3.07
Garhwal Division	20.66	2.07	23.42	2.34
Uttarakhand	23.37	2.34	25.98	2.60
Uttar Pradesh	19.91	1.99	25.52	2.55
India	24.80	2.48	25.00	2.50

TABLE 4

Percentage Distribution of Rural-Urban Population : 1961—81

	1961		1971		1981	
	Rural	Urban	Rural	Urban	Rural	Urban
Nainital	80.49	19.51	77.85	22.15	72.29	27.71
Almora	95.72	4.28	94.80	5.20	94.05	5.95
Pithoragarh	100.00	0	96.18	3.82	94.37	5.63
Kumaun Division	92.52	9.48	87.81	12.19	83.78	16.22
Pauri-Garhwal	95.20	4.80	91.67	8.33	89.52	10.42
Chamoli	100.00	0	95.90	4.10	92.03	7.97
Tehri-Garhwal	97.69	2.31	97.48	2.52	95.94	4.06
Uttarkashi	97.55	2.45	95.95	4.05	93.19	6.81
Dehra Dun	55.58	44.42	52.94	47.06	50.53	49.47
Garhwal Division	86.20	13.80	82.99	17.01	79.42	20.58
Uttara Khand	88.25	11.75	85.32	14.68	81.58	18.42
Uttar Pradesh	87.25	12.75	85.98	14.02	81.99	18.01
India	82.00	18.00	80.00	20.00	77.00	23.00

TABLE 5

Literacy Rate 1961—81 (Percentage)

	1961			1971			1981		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Nainital	27.2	36.4	14.3	31.9	41.3	20.2	37.2	46.7	26.0
Almora	21.8	39.1	5.4	28.1	45.9	11.5	38.1	57.4	20.7
Pithoragarh	22.4	40.2	5.7	31.9	49.7	14.6	37.9	56.3	20.4
Pauri Garhwal	22.7	42.4	5.9	32.0	49.3	16.5	41.7	58.2	27.2
Chamoli	21.3	40.9	3.8	28.7	49.9	9.6	37.7	57.6	18.6
Tehri-Garhwal	15.9	32.6	2.1	19.3	36.4	4.9	27.3	47.0	9.5
Uttarkashi	15.6	28.7	1.9	22.1	37.0	5.4	28.3	45.2	9.3
Dehra Dun	38.6	47.4	27.1	43.7	54.7	33.4	51.9	60.5	41.5
Uttar Pradesh	17.2	26.7	6.8	21.7	31.5	10.5	27.4	38.9	14.4
India	24.0	34.4	13.0	29.5	39.5	18.7	36.2	46.7	24.9

On fighting black money menace

Dr S. P. Agnihotri
Km. Jaishree Rawat

The problem of black money does not exist in India alone. It is omnipresent in the world today, though in India it is in a virulent form. One shudders to think that the annual rate of black money generation in the country, according to a study, was Rs. **40,110** *crore in* 1984-85. *While holding the very structure of our tax system and the massive government expenditure responsible for provocation of tax-evasion, the author feels that the problem is not going to be solved unless the very mechanism by which black money is generated is replaced by something better.*

CURRUPTION, BRIBERY AND BLACK MONEY, popularly known as the 'Parallel Economy' have become the backbone of public life not only in India but all over the Third World. Their governments are struggling to cope with the problem.

Black money ?

What is black money really ? Perhaps in the Indian sense of the term, we can describe it as 'Number Do Ka Paisa'. But in real terms, incomes earned as a result of anti-social economic activities and income saved as a result of tax evasion and avoidance is popularly known, in economic parlance, as 'Black Money'. The black is known by different names viz :—moonlighting, parallel economy, black economy, second economy and the like

Indian tax system is not only inadequate inflexible and lop-sided but its very structure is faulty resulting in large scale tax evasion and tax avoidance. Tax evasion and avoidance is associated with manoeuvers involving an element of deceiet, mis-representation of facts, falsification of accounts including downright fraud. Coupled with anti-social activities such as smuggling, hoarding, bribery and bootlegging, tax evasion and avoidance help to increase black money which can neither be shown as income in the books nor can it be ploughed back in any clean business or commercial proposition. Black money helps to generate more and more black money soon resulting in a virtual parallel economy functioning alongwith the bonafide economic structure of the country and fouling it at almost every step and stage

Tax evasion

The problem of tax evasion and avoidance is one of the most serious ones of our tax system. Tax avoidance is distinguished from tax evasion in the sense that tax evasion is an illegal way of avoiding tax liability while tax avoidance is avoiding tax liability by taking advantage of loopholes in the tax laws. Tax evasion is a fraudulent practice, though both tax avoidance and evasion are immoral and in both cases governments lose revenue. To make up for the loss of revenue, governments push up the

rates of various taxes further and widen their tax [illegible] resulting in further tax evasion and avoidance and thus, setting in motion a process of vicious circle.

It hardly needs emphasizing that the evil of tax evasion should be eradicated from the country. It may not only enable the authorities to raise additional resources without corresponding increase in tax rates or spreading the tax net further, but also make it possible for them to lower certain existing tax rates. A tax system involving large scale tax evasion and avoidance lacks adequacy and buoyancy, the two of the basic features of a good tax system. Besides, tax evasion breeds black money which creates its own parallel economy. Black money distorts the demand and supply positions of various items in the country and thwarts the attempts of the authorities at effective planning. Their efforts of regulating the economy are also neutralized. Artificial scarcities are added to the genuine ones and inflationary pressures are strengthened and effectiveness of Government's fiscal and monetary measures is either lost or reduced. The productive resources of the country are diverted into less desirable and sometimes undesirable channels. It causes a considerable amount of leakage of foreign exchange through shady foreign trade deals, and also through wrong invoicing, secret cuts and commissions on joint ventures and collaboration agreements involving Indian and foreign parties Moreover, as tax evasion increases, the tax burden on those who are paying taxes honestly has to move up in order to provide a desired level of revenue to the Government. All said the effects of tax evasion and black money can only be termed as disastrous for the Indian Economy.

Lavish expenditure

Large and ever increasing Government expenditure itself is another major generator of black money. This is eloquently highlighted in the Report of the National Institute of Public Finance & Policy on Black Money (NIPFP), sponsored by the Government of India. But precious little is done to tackle this aspect. It is not surprising, therefore, that scandals regarding Swiss accounts should come to surface.

In fact, the whole lot of massive Government expenditures is far too exposed to black money generation and defence deals are only a part of this mass. Too much focus on a few deals and of few crores should not lull us into forgetting the real dimensions of total problem. We must remind ourselves that according to the black money study, the annual rate of new black money generation had reached Rs. 40,110 crores in 1984-85, or well over Rs. 4 crores per hour, 24 crores a day, 7 days a week; and that tax evaded incomes, according to the same report are 2½ times as much as tax assessed incomes.

Corruption

The most deleterious feature of the black economy, however, is the growing corruption in society. Every transaction, big or small, involves the passing of money under the table. This cancer of curruption has reached such proportions that few in the economy seem able to escape it or its outreach. The latest manifestation of this is the report of the IMF that over Rs. 1800 crores per annum are stashed away illegally in one country, Switzerland, by Indian nationals.

The noted economist D. R. Pendse wrote, however, that black is a problem with a difference. In the case of all other problems, the person with the problem suffers. People with black money, however, have no problems but manage to create some for people who do not have it. Pendse in a very interesting formulation has divided black money into two categories. "First", he writes, "there is money which becomes 'black' because it is earned from a source which is itself illegal. The Pugri taken for selling a standard flat in places like Bombay; prices, higher than statutorily controlled prices, received for scarce commodities like cement or steel; vast fortunes made from foreign exchange: fiddles from smuggling, gambling, matka or from taking bribes, are all covered under this category." "The second category of black money is what is earned from perfectly legal and legitimate sources, but what becomes 'black money' to the extent that it is not disclosed in tax returns; because the services which these professionals render are otherwise perfectly lawful and legitimate"

Interestingly, he excluded* thefts and robberies from the ambit of black money since by his definition "black money transactions are, in a sense, a result of free choice of both sides. Even the not so exclusive club of 'black money boys' draws the line somewhere."

Post-independence India saw a rapid distorted growth of the scarcity economy and the proliferation of controls and licences. In turn, licence bred licence and control corrupted at amazing speed. Add to this "kick-back" money, a strangulatingly high rate of corporate and personal taxation, a sociological galloping of artificial needs created by unequal and distorted developments, and you have the breeding ground where the black money viruses have developed immunity from all "treatment" be it inducement or punishment.

Parallel economy

The public perception of black money as something independent of the economy has been further reinforced by experts referring to it as a 'parallel economy'. In reality, however, black money is an integral part of the Indian Economy and if we were to build a model the nearest would be a circle representing the regular economy with tangents meeting it at all points disturbing its balance, or tilting the circle without any predetermined direction.

The general belief that only black is converted into white and not white into black is as popular a misnomer as any other. The Black and White act dialectically as the resultant of the thesis and the antithesis in an un-marxian parenthesis, strangling the economy.

The conversion of white into black on a large scale is done on the basis of premium payments. For every rupee in white you could get Rs. 2.50 in black. The black money mixed with white is then invested, but the nature of these investments creates sectors of grey in Indian Economy which planners find very hard to rub off. The main areas of speculation and investment are commercial buildings, luxury apartments, commodity speculation, the film industry and smuggling. It is never used in long term productive investment in high-investment-low-profit areas-since the very nature of the black-white investment needs quick returns on investment. With unaccounted money power it diverts essential goods away, and adds to the tremendous escalation of costs. In the construction industry, especially in private middle-income housing, white money gets converted into black money since that part of the payment which might be out of genuine savings for which there is no receipt, becomes automatically black.

Its size

An analysis of black money has been attempted by a variety of specialists and committees. In 1953-54, Prof. Nicholas Kaldor had estimated that the percentage of black money to the national income was 6. The Wanchoo Committee had estimated black income in 1968-69 at Rs. 1400 crores, constituting 4 per cent of the national income. In a recent estimate Prof. D. K. Rangnekar has estimated that the black income in 1980-81 was 16 per cent of the G.N.P. According to the estimate of Poonam and Sanjiv Gupta in 1967 about 9.5 per cent of the G.N.P. was black money, while in 1978, the percentage rose upto 49. As per the estimate of International Monetary Fund, the ratio of black money to G.N.P. in 1983-84, was 18 to 21 per cent. (Table 1)

ESTIMATES OF THE SIZE OF BLACK MONEY IN INDIA

Year	Rs. in Crores	Percentage of black money to G.N.P.	
1953-54	600	6	Prof. N. Kaldor.
1961-62	700	4	Wanchoo Commission.
1968-69	1,400	4	
1961-62	1,150	7	D.K. Rangnekar.
1968-69	2,833	9	
1980-81	18,241	16	
1967	—	9.5	Poonam & Sanjiv Gupta.
1978	—	50	,, ,,
1983	—	50	I.M.F.
1974-75	9,958 to 11,870	15 to 18	Raja Chelliah Committee.
1983-84	37,000	18 to 21	,, ,,

Pragmatic policies

In devising pragmatic policies to control black money, policy makers must concentrate on what they can achieve instead of chasing what they cannot; and their policies must ensure that tax evaded revenue starts flowing back to a leak-proof treasury.

One of the measures suggested to check this evil was 'Voluntary Disclosure' of black money and wealth by the tax dodgers. There had been four schemes of voluntary disclosure so far. The first one was announced in 1951; the second and third in 1965 and the fourth and the last in October, 1975. The results of these schemes were not very encouraging as the proportion of black money that was actually declared under these schemes, comprised only a small proportion of the total hidden amount. These schemes only enabled the tax dodgers to come clean in so far as their past misdeeds were concerned. In themselves, these schemes did not and could not provide for plugging the loopholes in the working of the economy and the legal structure through which the black money gets generated.

Government expenditure needs to be drastically reduced, particularly black money prone projects and programmes. Some fundamental financial restructuring of several of the state enterprises has also to be accomplished for this purpose. Keynes said "The important thing for government is not to do them a little better or a little worse, but to do those things which are not done at all." Policy makers should abide by that golden advice.

Some thing better

Its no gain-saying the fact that most of the remedies often suggested for checking tax evasion, Government expenditure and black money concentrate mainly upon flushing out the existing stock of black money in the economy and bringing it in the

(Contd. on page 34)

Can laws alone uplift Indian women ?

G. Ravindran Nair

The Constitution, the Government and the Judiciary have all played vital roles in safeguarding the rights and privileges of women in India. Yet, the desired social change in their status is still, eluding. Laws by themselves cannot bring about this change. All said and done, says the author, law will succeed only when social awareness matches the spirit of law.

BOTH THE CONSTITUTION-MAKERS and the law makers all along held the view that, unless women who comprised half the population enjoyed all the political, economic, social and legal rights as men did, freedom in the real sense would have little meaning. Accordingly the Constitution provided that besides being entitled to all the rights and privileges along with men, women were covered by certain general and special provisions. Marriage and divorce, guardianship of children, maintenance and inheritance, rights as working women and the different measures taken from time to time to safeguard them from atrocities and violence are some of the subjects for women covered by law since Independence. Though it cannot be claimed that laws have totally changed the status of women, the very fact of enactment of such enlightened laws seeks to set in motion the process of change in the thinking and attitudes of the people.

Divorce rights

India has different personal laws for the different religious comunities like the Hindus, Muslims, Christians, but there are some secular laws like the Special Marriage Act, 1954 that can be invoked by citizens belonging to any community. Today laws provide that divorce can be sought on the basis of mutual consent or on grounds of cruelty. The right to exercise the 'option of puberty' to obtain a divorce (available earlier only to Muslim women who were married while still minors) has been extended to the Hindu women with the difference that while this right in Muslim Law is limited to unconsummated marriages, in Hindu Law, it can be exercised whether the marriage has been consummated or not. In the case of divorce again the period of waiting after a decree of judicial separation or restitution of conjugal rights has been reduced from two years to one year. While the law did not specify situations that would constitute cruelty as a ground for divorce, an enlightened judiciary has stepped in and interpreted it to include mental cruelty. For instance, a false allegation of adultery by the husband or wife is construed by the courts as mental cruelty.

Despite the tremendous advances made in the laws pertaining to marriage and divorce such practices as polygamy continue in certain areas and disparities between different communities of the right to divorce still exist These anomalies can be removed only when the laws relating to non-Hindu communities can be suitably amended. Women's organisations have been pleading for a Common

Civil Code, but the government feels that such a code can be framed only when such a demand is made from all the communities.

Guardianship rights

The rights of women to adoption and guardianship are based on their status and concern as mothers. The Hindu Law of Adoption made radical changes and introduced equal rights between men and women. It also legitimised the right of the girl to be adopted, which was not recognised in pre-Independence India. But there is no law of adoption for other communities. The Adoption Bill, a secular law which would have enabled any citizen to adopt a child was introduced in Parliament in the early 70s, but has not yet been enacted. Women activists have been pleading for a uniform Adoption Act for all the communities.

The judiciary in India has played a progressive role on the issue of mother's right over the custody and guardianship of a minor child when the marriage is dissolved. The Committee on the Status of Women in India recommended in the mid-seventies that the sole criterion for deciding this question should be the child's interest According to the Hindu Minority and Guardianship Act, the father is the natural guardian for minors the mother having only a secondary right. The judiciary has, however, constantly held that the statutory requirements cannot take precedence over the interest of the child. In a case dealt with a few years ago, the Bombay High Court ruled that even the conversion of the mother did not disqualify her from guardianship of the child. Thus while the law as it stands makes the father the natural guardian even of a minor daughter, the judiciary has been guided by the welfare of the child in such cases.

Dowry menace

Spurred on to action by the rising wave of indignation among the public, particularly the women's groups, the law makers have taken up with renewed vigour cudgels against the practice of dowry which tended to debase the status of women. Though the Dowry Prohibition Act was passed as early as in 1961. the Act was found not adequately effective. The Act was amended in 1984; the amendment made the provisions of the law more stringent and changed the definition of dowry to include dowry demands made before, during and after marriage. The amendment also extended the right to women's organisations to initiate proceedings in court instead of limiting that right to only the aggrieved party as in the original law.

The law makers have also taken due notice of the cases of homicide and suicide on account of dowry demand. The Law Commission had suggested an amendment of the Indian Penal Code, Criminal Procedure Code and the Evidence Act to deal effectively with the growing menace of dowry deaths. The amended law, as enacted lays down that when a women commits suicide within seven days of her marriage and when it is shown that her husband or his relatives had subjected her to cruelty, then the suicide will be presumed to have been abetted by the husband. Similarly when a woman dies within seven years of her marriage "raising a reasonable suspicion that some other person has committed an offence," there will be a post mortem.

Sacrosanct

Laws have also been amended to award stringent punishment to those found guilty of violating the modesty of women. Punishment for rape was long ago provided for in the Indian Penal Code, 1869. The Criminal Law Amendment Act, 1983, provides for punishment of rape with a minimum of seven years imprisonment. It also provides for the "protection of the victim of rape from the glare of embarrassing publicity during the investigation as well as the trial". Where the violation of the modesty of a woman is alleged to have taken place in an institution where her honour is supposed to be taken greater care of (say. in a police station, hospital or protective home), the onus of proof that rape has not been committed falls on the shoulders of the alleged offender himself.

In 1986 a new Act came into being that sought to prohibit the denigration of women in photographs, advertisements and films Over the years there has been growing criticism of the projection of women in the mass media commercialising the female body for petty profit motives. Advertisements in the print media, films and television frequently rely on sex appeal to attract attention to products. The Indecent Representation of Women (Prohibition) Act, 1986 was timely since many films unabashedly rely on sex for box office success showing women as mere objects of erotic stimulation. No doubt, this kind of indecent representation has indirectly contributed to increasing harassment to and violence against women

As early as in 1956 India brought into being a law to deal with the victims of prostitution. The Suppression of Immoral Traffic in Women and Girls Act, 1956 inhibits trafficking in women and girls for purposes of prostitution as an organised means of living. It provides penalties for various offences like keeping a brothel. living on the earnings of prostitution, procuring or taking women or girls to premises where prostitution is carried on.

Horror of sati

In the wake of the nationwide indignation against the revival of the obnoxious practice of Sati as exemplified by the Deorala incident in Rajasthan, both Houses of Parliament passed the Commission of

Sati (Prevention) Bill, 1987 providing for death sentence or life imprisonment for abetment of Sati, glorification of Sati and aiding and abetting in this crime against women will be a cognisable and non-bailable offence, punishable with upto seven years' imprisonment with minimum fine of Rs. 5000|- which can go up to Rs. 30,000|-.

In order to combat child marriages, which is still prevalent in certain parts of the country, the law makers took steps from time to time to prevent them through strict legal action. Child marriages have always been a concern for social reformers, planners and demographers. These marriages spawned such problems as maternal illhealth, infant mortality, early widowhood and lack of access to education for girls. After Independence the earlier Sharda Act of 1929 was amended by a new Act (the Child Marriage Restraint Act, 1978) which raised the age of consent for girls to 18 and for boys to 21.

Working women

For the working women in India several enactments have been made since Independence to ensure better working conditions for women and to ensure equality with men. The Factories Act, 1948, the Mines Act, 1952 and the Plantation Labour Act, 1951 prohibit the employment of women between 7 p.m. and 6 a.m. in factories, mines and plantations, regulate working hours and contain provisions for their safety and welfare. The government is authorised to fix the minimum load that may be lifted by women. Provisions have been made under these Acts to run creches for the children of working women.

Similarly the Maternity Benefits Act, 1961 is applicable to every establishment, plantation, mine or factory and provides for payment of maternity benefits at the rate of the average daily wage for the period of working woman's actual absence. The Equal Remuneration Act, 1976 provides for the payment of equal remuneration to men and women workers and prevention of discrimination on grounds of sex against women in the matter of employment. The Contract Labour (Regulation and Abolition). Act, 1970 regulates the working conditions of contract labour (which includes women), payment of wages and provides for welfare facilities and creches for the children of working women engaged in construction work.

Laws by themselves may not bring about the desired social change unless people become aware of those laws and make use of them to fight for a square deal. To achieve this objective free legal aid bureaus have come up in certain urban centres to help indigent women; a few voluntary agencies have even started legal literacy classes. All said and done, law will succeed only when social awareness matches the spirit of law. □□□

(Courtecy : PIB New Delhi)

(*Contd. from page no.* 17)

difficult to prove one way or the other that either gradualist or radical policies of agrarian reform are more "productive" over time. Radical policies have more meat in them, but a more useful analytical framework would involve considering the necessary and sufficient conditions of success of agrarian reform which could be deduced from the experience of all three schools of thought.

(*Contd. from page* 15)

Major schemes

The major schemes under the rural development programmes, inter alia, include Integrated Rural Development Programme, Development of Women and Children in Rural Areas, Drought Prone Area Programme, National Rural Employment Programme, Desert Development Programme, National Rural Employment Programme, Rural Landless Employment Guarantee Programme, Rural Water Supply and Sanitation Schemes relating to land reforms, agricultural marketing including rural godowns and roads in tribal areas.

Anyhow, the biggest achievement in the rural development scene, perhaps has been the change in the attitude of the people towards Government sponsored incentives like loans and subsidy. There was a time when the tradition bound villagers especially of the northern states looked upon the bank loans as charity and then refused to accept it. They would rather starve, than accepting alms from anyone including the Government. The situation has changed now and people have realised that such schemes are there only to help them. □

(Courtesy : PIB, New Delhi)

Scheme to settle Jhum cultivators

About 25000 jhumia families in nine States are to be settled on permanent cultivation over a period of five years under a Central Sector scheme for control of shifting cultivation.

The scheme, starting from the current year, draws its funds of Rs. 75 crore from 100 per cent central assistance to State Plans.

The nine States covered by the scheme are Andhra Pradesh, Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Orissa and Tripura.

Nearly 6.25 families are invovled in nearly one million hectare land although the total area affected by jhumia practice is about five lakh hectares. □

Planning Commission reviews Seventh Plan mid-term appraisal

The full Planning Commission met under the chairmanship of the Prime Minister, Shri Rajiv Gandhi, on January 13, 1988, to discuss the Mid-term appraisal of the Seventh Five Year Plan (1985—90). The three hour deliberations reviewed the recent developments in the major sectors of the national economy.

The Prime Minister stressed the need for more efficient use of the available resources with a view to increasing production through better utilisation of funds earmarked for various sectors. He said that agriculture has to be given top priority in order to ensure that agricultural momentum is regained. An eight-point action plan was discussed which includes fixing zonal targets and identifying problems relating to each zone ; priorities for each zone ; evaluation of inputs required for that particular zone ; S&T support needed to cut costs and raise productivity ; assessment of problems in respect of implementation with a view to overcoming the same ; monitoring ; high-level evaluation and an efficient feed-back mechanism. It was decided that a group under the Member (Agriculture) in the Planning Commission would look into these factors and prepare an Action Plan for ensuring that the targets for agriculture are realised.

Cut administrative cost

On the resources side Sh. Rajiv Gandhi said that in addition to better utilisation of available resources we have to monitor the cost-effectiveness of the projects and find ways and means of trimming administrative costs. He said that we must make sure that no diversion of funds takes place from earmarked priority areas to non-priority areas. The Prime Minister said that in order to maintain the tempo of development additional resources mobilisation was inevitable.

Initiating the discussion, the Prime Minister expressed his appreciation for the work done by the Planning Commission for the Mid-term appraisal and the role that it plays in the development process. He stressed the need for more systematic efforts on futuristic projections dealing not just with economic but social factors. He said that there was a big gap between the aspirations of the people and the delivery system which had to be made more efficient.

Aim higher growth

Shri Gandhi said that we must re-examine our schemes to identify weakness in schemes or their implementations. He said that we must eliminate the gap between conceptualisation and implementation of projects. We must try to evaluate how higher growth rates can be achieved using available resources by reducing overhead costs and non-essential expenditure.

Shri Rajiv Gandhi said that we have to identify problem areas, fix priorities, work out solutions and gear up the implementation process. He said that while agriculture has to be given top priority, we have to activate industry to make it more energetic in adopting the latest technology.

Welcoming the Prime Minister and the Members, Planning Minister and Deputy Chairman, Planning Commission, Shri P. Shiv Shanker, said that the Government could take pride in achievements in the Seventh Plan. He said that except for agriculture which was badly affected by drought, growth in other sectors had accelerated sharply. The Minister said that major productivity gains were registered in infrastructure and modernisation processes have started in many industries like machine tools, automobiles, electronic, cement and petrochemicals. Shri Shiv Shanker said that resource mobilisation and Plan outlays in first three years had kept pace with planned requirements and the balance of payment situation is improving.

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Protect consumers against quality tricksters

K.R. Paramesvar

In spite of the enactment of various consumer protection laws and establishment of bodies like Bureau of Indian Standards to safeguard consumer interests, the consumer finds himself today unprotected when faced with reality. What the author emphasises here is that unless consumer awareness is created, the efforts of the Government and voluntary organisations can't achieve the desired results. Consumer education, he feels, should be given top priority and BIS should reorient its priorities based on 'quality' to check malpractices and exploitation of the consumer.

When we spend our hard-earned money buying pulses, edible oil or turmeric powder, are we sure that we are getting stuff of proper quality ? Today, when manufactured consumer items are available in an astoundingly wide variety with attractive packing, sold in frenzied sales campaigns, it still remains a fact that we have to often accept sub-standard and unsafe products. It is not just a question of the consumer being charged extra : the materials used for adulterating edible items can lead to serious clippling diseases.

The twin measures of the Consumer Protection Act and the Bureau of Indian Standards Act are stated to usher in a new era of consumer satisfaction in our country. The thrust in the Industrial policy in the Seventh Five Year Plan will further help this movement. One of the important objectives of the industry sector in this Plan is : "To ensure adequate supply of wage goods and consumer articles of mass consumption at reasonable prices and of acceptable quality". The policy framework proposed is expected to encourage modernization and technological upgradation together with injecting a substantial degree of competition. This would bring about a reduction in cost and improvement in quality thus contributing to a much higher level of customer satisfaction.

Recent studies have clearly brought out the importance of consumer oriented industries, both from the point of view of volumetric growth and penetration in rural areas and low income groups. Consumer goods, especially durables, are becoming an important item of consumption expenditure. Keeping in view the linkages of consumer goods with other industries and services sector, it can be visualized that in the coming decades the growth of consumer goods will influence significantly the basic and capital goods industries and the services sector. Studies the world over show that every enterprise with some degree of excellence has always given importance to customer satisfaction.

Certifying quality

Bureau of Indian Standards, the national standards body of the country, vested with the task of formulation and promotion of standards in all sectors of the economy protects the interests of the consumer through the certification of goods for conformity with the standards. To reflect the consumers' viewpoint in the various standards and specifications formulated by BIS, consumers are given adequate representation in its various technical and advisory committees. In fact, product specifications which lay down the parameters for determining their quality constitute about 6C per cent of Indian Standards. Among these standards, over 2000 would be of direct interest to the common man. These standards specify optimum quality requirements of the product to ensure fitness for the purpose of the product. As for example, the Indian Standard on General Services Electric Lamps specifies the dimensions of the cap of the lamp so that it fits into any brand of lamp holder. Further, the standard also specifies the service life, light output and the capacity to withstand fluctuations in voltage, to encounter the situations prevailing in the country. The performance specifications for products are linked with the techniques for quality control and testing relevant for that product.

The Bureau also operates a Certification Marks Scheme which certifies the products for conformity with the standards so that the consumers will be able to identify the quality products so certified with the familiar ISI Mark appearing on them Refrigerators and other consumer durables, blades, hosiery goods, sports goods, biscuits and milk powder are some of the examples of BIS certified products on a voluntary basis. However, coverage under the BIS Certification Marks Scheme has been made obligatory for a number of products of direct consumption, particularly those involving hazards to health and safety of life These include vanaspati, food colours, cement, LPG cylinders, gas stoves, electric bulbs, power threshers for agricultural use and appliances used in mines and other hazardous areas.

Code for the manufacturer

There are conditions which must be fulfilled before a certification scheme can operate for any given class of goods. There must be a standard for the particular goods and methods of testing must be devised and stated in the standard. The manufacturer must possess the right manufacturing equipment and technology and have adequate access to suitable testing equipment. He should also have a robust quality assurance system. Routine testing must be maintained and there must be a continuing audit of the factory and test results by an independent authority. Occasional check testing by purchase from the open market is an added safeguard. Also the law should be prepared to intervene and administer justice in cases of serious abuse of the Mark

With our structure of industry and its technological capability it has not always been possible to ensure some of these prerequisites. A massive effort would be needed to create these favourable conditions especially in the small scale sector and no time should be lost if our goods are to be of desirable quality. A large number of organizations are involved in these operations e.g. DGTD, DCSSI, SISI, State Government agencies, BIS, etc. Coordination of their effort is very essential.

Many manufacturers voluntarily come forward to operate the BIS Certification Scheme due to insistence by some of the bulk purchasing organizations giving preference to BIS certified products in their purchases.

Of late there seems to be some awareness coming up in industry circles to voluntarily take measures for regulating the quality of their products; for example, FICCI have drawn up 'Norms for Business Ethics'. The Confederation of Engineering Industries (CEI) have come out with a self-imposed 'consumer-code' for manufacturers of engineering goods. All this is certainly indicative of a greater awareness but what is now called for is translation of the intentions into action.

Consumer awareness through BIS

To build up awareness among consumers regarding Indian Standards and BIS certification marking scheme, BIS is carrying out publicity through advertisements in newspapers, radio, television, etc to the extent possible. Arising out of the recommendation of an "Open House on Consumer's Viewpoint on Standardization and Quality Certification" which was organized in February 1983, BIS started bringing out a special feature entitled 'Consumer News' in its monthly journal, now known as STANDARDS INDIA. The Consumer News contains a brief write up of new Indian Standards or revised Indian Standards of consumer's interest and also news about consumer events. It is bringing out a list of manufacturers of consumer items whose products carry the ISI mark. It has also been providing information to consumer organizations in response to their queries relating to Indian Standards and BIS certified consumer products.

An equally important legislation which was also enacted at the same time is the Consumer Protection Act 1986. This is a comprehensive legislation which will go a long way in supporting the growing consumer movement in the country. The first meeting of the Central Consumer Protection Council was held on 28 September 1987. A number of State Governments have also set up State level committees to support the consumer protection movement in the country.

Consumer organisations could play a vital role in consumer protection. They could include academicians and professionals, among their members so that

their knowledge could be made use of in collecting consumer problems relating to quality and safety of products and in tackling the same by taking up the matter in an appropriate manner with the concerned agencies.

Publications could be brought out for disseminating information regarding product quality, safety, etc. to the members.

They could organize surveys regarding specific consumer problems relating to quality, safety, etc. and project the problems to the concerned agencies.

They could lay down criteria for selecting their nominees on various committees of the Government, BIS and other agencies so that only competent persons who will be able to appropriately voice the views of the Association effectively and in a purposeful manner, are nominated.

How can consumer help himself

The consumer protection movement aims at eliminating the exploitation of the consumer by the manufacturers, traders, 'so-called' professionals etc. The strength of the consumer protection movement depends on the consumer awareness among the public and organization of the public into strong action groups to fight against the exploitation of consumers.

Therefore the growth of a large number of voluntary organizations alone will not be sufficient. These organizations should have a proper perspective and they should be financially strong enough to take on the organized sectors of industry and trade.

The strategy therefore should be to give top priority to consumer education through schools, colleges & the media, strengthen the existing voluntary organizations and provide adequate incentives for them to take up consumer causes. The consumers should not only be educated on the methods by which they are being exploited but also on the need to organize themselves into strong groups to resist such exploitation.

Testing laboratories could be set up for testing common consumer items (as done by Karnataka Consumer Service Society, Bangalore and Super Bazar Cooperative Stores Ltd., New Delhi) or make use of the Government are other agencies for organising such testing work. They could educate the consumers to insist on packed, properly labelled and graded products and finally approach newspapers, radio, TV, etc., to devote some space/time for consumer education.

In the next phase of our industrial development and growth the consumer will be a key figure.

Industry and regulatory organisations will have to take note of this. Since 'quality' will be the main criterion of the consumer, organizations like the Bureau of Indian Standards will have to reorient their priorities accordingly. The new BIS Act provides the organization the framework for achieving this goal and the organization looks forward to a meaningful dialogue with consumers and a role in ensuring consumer protection.

(Courtesy : Feature Service, PIB)

(*Contd. from page 28*)

Correct trade balance

The Planning Minister said that in addition to agriculture and resource mobilisation, we must continue to watch balance of payment position and ensure that the tempo of growth in industry and infrastructure was maintained. The Planning Minister also stressed the social objectives of Planning and the importance of human resource development.

Some of the Members pointed out that the State Planning Boards were not meeting regularly and suggested the States should be asked to activate their planning process both at the State and district level. The Members were unanimous with regard to the need for special attention to agricultural development programmes so that the targets of production in this vital sector of economy are achieved. There was a detailed discussion on irrigation planning, and dry and farming. Short-term and long-term measures were suggested for achieving the targets.

On the resources side, it was pointed out that the Non-Plan expenditure had been increasing at a fast pace which was eroding resources for planned development and in order to keep the tempo of progress additional resources were needed.

The meeting was attended by Shri P. V. Narasimha Rao, Minister of Human Resource Development, Shri G. S. Dhillon, Minister for Agriculture, Shri Buta Singh, Minister for Home Affairs, Shri N. D. Tiwari, Minister of Finance and Shri Sukh Ram, Minister of State for Planning, Prof. M. G. K. Menon, Shri Abid Hussain, Dr. Raja J. Chelliah, Shri Hiten Bhaya, Dr. Y. K. Alagh and Prof. P. N. Srivastava, full time Members of Planning Commission, Shri B. G. Deshmukh, Cabinet Secretary and other senior officials and Secretaries of the concerned Ministries.□□□

REC pays highest ever dividend

Rural Electrification Corporation has declared a dividend of Rs. 1.87 crore for the year 1986-87. This is the highest-ever amount of dividend declared by the Corporation in any year. The Chairman and Managing Director of the Corporation, Shri Satish Khurana presented a cheque of this amount to the Energy Minister, Shri Vasant Sathe, in New Delhi on October 21, 1987.

BOOK REVIEW

National wage Policy

National wage policy by I. Satya Sundaram. Published by B.R. Publishing Corporation, 29|9, Shakti Nagar, Nangia Park, Delhi 110007. First published: 1987. Pages 276. Price Rs. 125.00

In the eight chapters of this book, the author has attempted to provide as much factual information and data as could be possible in the realm of wage payments and other connected issues. This he has ably done mostly by speaking through this author and that authority, and in the process loses firm rapport with the reader. The sequential handling of the subject also is sacrificed in an over-anxiety to quote as many as possible. Take for instance chapter one in which the fifty pages of the text contain 138 references. Likewise all other chapters (except the last one) give references which are useful but sometimes appear to be redundant when they could really be dispensed with. We have perhaps yet to reach the stage when our economists give some novel ideas of their own rather than indulge in the much-beaten track of repeating what others have already said.

Nevertheless, the importance of the book lies in the density of information it gives to students of economics who would surely find the book as a good digest on diverse views in the matter of wages of all types and in all sectors of the economy. The author rightly observes that in a country suffering from grinding poverty, ensuring effective implementation of laws relating to minimum wages assumed importance. The alarming growth in labour force, particularly in the unorganised sectors, considerably reduces the bargaining power of labourers The employers are, therefore, in a position to pay very low wages—less than the minimum wages—to the workers.

A plea is made for evolving a strategy to stabilise prices, particularly those of essential goods. Price stability brought about through increased productivity and production would be helpful and lasting while price stability through subsidies confers benefits on consumers only in the short run. These subsidies may prove to be counter productive in the long run. In the author's view, not many governments have realised this aspect of the problem. Besides, a wage policy should always be supported by an income policy. Low productivity and absence of unionisation in farm labour have caused non-implementation of the minimum wage legislation.

It is observed that an irrational wage structure has emerged mainly because wage levels are related not to the productivity level, but to price index. It is also said that workers are not solely responsible for low productivity. But then, wage productivity linkabe will have a healthy psychological impact on the workers for striving to achieve higher levels of productivity with a view to enjoying higher wages. An interesting observation made by the author is that when a company is allowed to pay very high wages simply because it is having capacity to pay it, labourers working in not-so-prosperous firms have to curse their fate. If the latter are compelled to pay higher wages, its impact is passed on to the consumers, thus fueling the price spiral further

While overtime payments to employees should be avoided, dearness allowance given from time to time has caused distortions in the wage structure of the economy when the unorganised sector is not able to cope up with such hikes. It is also suggested that financially losing concerns should not be allowed to pay bonus to employees. In fact, even on financially sound firms, there should be a ceiling on the payment of bonus so that the gains of higher productivity should also be passed on the consumers.

NAVIN CHANDRA JOSHI

Environment

Environment . Nursery of Life, by Anjali Mookerjee Publication Division, November 1985, Price Rs. 20.

No subject has aroused as much public interest world-wide in recent years as environmental conservation. Pollution has assumed an all-pervasive dimension. It knows no national barriers. When a nuclear power station starts befouling air and water by emitting radio active dust and smoke, that becomes a global concern. When the developed countries detonate atomic devices underground or in the sea, it attracts world attention. The conservationists register their moral protest over the destruction of marine life and the long-term imbalance in nature such irresponsible actions cause. A slight negligence on the part of someone somewhere is apt to take a heavy toll of human lives and harm hundreds of thousands. The Bhopal gas tragedy is fresh in memory.

That all of us are inhailing a lot of carbon dioxide and carbon monoxide every day is a common place reality. Unwittingly we are also drinking water which is not pure enough at times. Atmospheric

pollution from the industries has become an on-going process. Its gift is acid rain which is affecting the fertility of the soil. Forests are diminishing and the growing population is playing havoc with the eco-system of cities and villages.

This book touches on different issues relating to environment and its continuing degradation. It rightly emphasises that life and political environment might go together. Environment supplies the nutrients and the conditions so vital for the existence of life. This combination of living beings and the environment supporting life is biosphere. The biosphere extends up into this atmosphere to more than 10 thousand metres, down into the ocean to a depth of about 8 thousand metres and over 250 metres below land surfaces.

Most forms of life are adapated to a particular environment. It is restricted in general living conditions and food resources. The nutrition of any species must be in balance with the biosphere as a whole Hence, the biosphere is a global biological system based on a continuous or cyclic flow of energy and nutrients.

The biomass provides food for all living organisms.

By the turn of this century world population is likely to touch the staggering 6.9 billion mark. India's population continues to grow steadily despite birth control measures. The mortality rate has declined over the years because of the improved living standards of the people by and large. Even then the saturation point has been reached. Should the population growth continue, our resources are bound to run out sooner than anticipated As the society attains a high enough scientific and technological level, a host of complexities arise in the relations between society and nature, mostly created by the human beings. Nature can no longer be regarded as an inexhaustable treasure house Its bounties cannot be exploited for ever.

Environmental degradation is proving dangerous to human life and activities. Industrial pollution is increasing the contents of the gases and solid substances in the atmosphere. This has resulted in a shortage of oxygen and rise in respiratory diseases, fresh water is also depleting fast.

The book focusses attention on all these problems of the contemporary civilisaion. Since the subject is somewhat technical, a lot of charts and diagrams have been used to illustrate the points. It may be useful to students in general The average reader may not be interested in its pedantic approach But the boon is welcome nervertheless

S. M. Kumar
New Delhi-110001

Indo-Africa relations

India and Africa through the ages—by Shanti Sadiq Ali published by National Book Trust of India, Price Rs. 18.75

The present book is based on Balwantrai Mehta Memorial Lecturers delivered by Shanti Sadiq Ali under the auspices of Bombay University. The pains taken by its author in recasting those lectures, obviously to make them more interesting reading for a general reader, seem to have been amply rewarded.

Shanti Sadiq Ali presents a rapid survey of the commercial, cultural and political contacts between India and the African continent in it. She traces the links from misty antiquity, through colonial period to the partnership of newly freed countries in the non-aligned movement. To establish her point she quotes from a host of ancient as well as modern documents yet never sounds pedantic. She avers that the importance of (Periplus of the 'Erythrean sea', the guide book of an Egyptian sailor, which is dated between AD 60 and AD 266, lies in the information "That India's trading contacts were confined not only to Egypt and the costal regions of the Red Sea, to northern Somalia, and ancient land of Punt, but had reached into the interior".

The declared purpose of bringing out this book as set out in its preface, is to promote better understanding and remove some misconceptions about Africa, generally and Indo-African relations in particular and to that end the author has tuned her whole narration. The discourse advances in a dilectic style. She refutes the common notion prevalent in the nineteenth century about Africa as a 'dark continent. She quotes Sir Reginald Coupland, a pioneer in African history, "The main body of the Africans . stayed for untold centuries sunk in barbarism .. ..(so that) the heart of Africa was scarcely breathing". Then in the same breath she arrays her arguments by quoting Oliver and Fage" "that Africans there were already well enough organised to exploit these resources (gold mines of West Africa and Zimbabwe) themselves and keep the overland trade in their own hands".

She argues that but for the European intrusion into the Indian Ocean, India's friendly relations with various African countries should have continued uninterrupted By a contrast, she says that unlike the precolonial commerce and trade, which acted as a stimulus to mutual development, the European trade with India and Africa was essentially exploitative and destructive reinforced as it most often was by technologically superior weapons. Again while discussing shared experiences, she feels akin with our African brethren and testified that "African advancement in trade and commerce was thwarted

in East Africa by colonial policies.......Neither Indians nor Africans were permitted to compete freely with the whites.

After analysing the political situation in the newly freed African States which adopted different political framework derived from their own experiences, she says that despite such difference "a broad consensus developed in favour of pursuing a policy of non-alignment by the time. The Organisation of African Unity was established". Continuing her search for evidence of Indo-African contacts for mutual benefit and of genuine friendship, she finally comes to the conclusion that "The recognition that India has a constructive role to play in efforts to achieve self reliance among developing countries in Africa has culminated in India associating herself with African Development Fund".

—Dilip Kumar Ghosh

Space fights

Indian Space flights. Mohan Sundara Rajan Publications Division, Ministry of Information and Broadcasting. 1985. pp. 160. Price Rs. 40.

'Go West, youngman!' This 18th century stirring call to the American youth to discover new frontiers would now appear to be somewhat anaemic when man has conquered almost all the hurdles like the Mount Everest, the poles and the depth of the pacific to quench his adventurous thirst. In the earth there was no frontier to challenge man. Space became the new challenge.

Though human mind has always been fascinated by cosmological wonders, man's tryst with the space has been a recent one. To be precise it was October 4, 1957 when the first satellite- Sputnik was successfully put into the orbit by the USSR. On April 12, 1961 began the history of manned space flight and Yuri Gagarin became the first astronaut. Since then there has been tremendous progress both in space flights and space technology Today there are innumerable satellites in the space and cosmonauts stay and work in orbit for months.

A developing country like India though not endowed with enough resources to undertake space experiments could not afford to lag behind. Though modest India has also achieved some distinction in its space programmes. The book under review written by a distinguished science writer is an account of the progress of India's space programme in a chronological order. Written in a lucid style the book would prove to be popular both with the knowledgeable and the uninitiated ones. The glossary would be of immense help to a lay reader interested in knowing the relevance and scope of space technology in India. A commendable work indeed! And for a welcome change production of this Publications Division book has been a neat one.

—P. Ghosh Dastidar

(*Contd. from page* 24)

tax net. Even the 'Voluntary Disclosure Schemes' were based upon this very approach. It is obvious that a long-lasting solution of the problem will not be forthcoming unless the very mechanism by which black money is generated is replaced by something better.

The existence of useless controls, licensing and permit Systems have a tendency to create artificial scarcity and provide an opportunity to the private sector to earn income which could be concealed from tax authorities. If a major reliance is placed on fiscal and monetary controls instead, we may be able to dry up the source of generation of unaccounted income to some extent. In addition, a vigorous drive against anti-social economic activities such as smuggling, hoarding, and bootlegging has to be undertaken on a war footing so as not only to plug some of the channels generating black money but also for putting a stop to the tremendous loss of foreign exchange which the country can ill-afford and which inevitably results due to such nefarious activities. □□□

Drought relief to Rajasthan and Gujarat

The Centre has granted Rs. 662 crore assistance to Rajasthan and Gujarat to combat drought.

A Central Team which had visited Rajasthan had approved ceilings of expenditure of Rs. 215 crore for the period November, 1987 to March, 1988 and Rs. 144 crore for the period April to June, 1988.

Another central team had visited Gujarat. On the basis of its report, the Government approved ceilings of expenditure to the extent of Rs. 157 crore for the period October to March, 1988 and Rs. 106 crore for the period April to June 1988 for the State.

The drought relief amount is to be used for employment generation for agricultural labourers and small farmers cattle care, drinking water in rural and urban areas, nutrition and health care with special reference to women and children, for cash doles to the old and infirm and subsidising inputs to agriculturists.

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The philosophy of Union Budget 1988-89

Mahesh Prasad

The Central Budget for 1988-89 was presented in the Lok Sabha by the Finance Minister, Shri N.D. Tiwari on February 29, 1988. The philosophy behind the budget is to 'revive agriculture and create a climate for industrial growth'. The author here examines critically the important aspects of the budget. He quotes the Finance Secretary as having said 'in case the monsoon is good, which is quite likely, the prices are not likely to go up much'. The author therefore points out that 'one would have to wait till the monsoons arrive and watch how effectively the schemes announced by the Government for the revival of agriculture and industry are implemented to determine the success of the budget'.

EVERY BUDGET AROUSES a lot of expectations The Union Budget for 1988-89, presented by the Finance Minister, Shri N.D. Tiwari, on February 29, was no exception. Few budgets can, however, satisfy every class. Shri Tiwari's maiden budget had to deal with an extremely difficult situation for the country's economy, created by the century's worst drought, which had affected all sections of the people. Agricultural production this year is likely to go down by 7 to 10 per cent, growth in industrial production has started decelerating after attaining high levels and people have been oppressed by high prices. These were the problems, which the budget was called upon to tackle and it would be judged by the measure of success it achieves in resolving them.

The philosophy behind

The philosophy of the Budget, to quote the words of the Finance Secretary, Mr. S. Venkitaramanan, was to "revive agriculture and create a climate for industrial growth." The Budget had sought to do so by presenting a stable tax regime and removing constraints to the growth of agriculture and industry. Excise had been restructured to reduce the burden on the common man. Measures to promote exports had been proposed and plan investments had been maintained, he said.

The Budget has, no doubt, presented a large number of schemes, a few of them innovative, to revive agriculture, promote small scale and village industry, revive the sick textile and cement industries, boost housing activity and to provide efficient medicare to the people. It has also proposed a number of schemes for the under-privileged sections of the society. While the benefits to be conferred upon by them would depend upon their effective implementation, a budget is also to be judged by the way it tackles the larger macro-economic problems and the fiscal regime it presents. The Economic Survey 1987, which had preceded the Budget, had warned the Government of the mounting non-Plan expenditure and it was expected that the Finance Minister would announce measures to significantly step up tax revenues and bring down non-Plan expediture, including subsidies. It is now quite clear that Shri Tiwari was not in a position to undertake such an exercise. Non-Plan expenditure has gone up by 22 per cent to Rs.47,846 crore in the budget estimates for 1988-89 from Rs. 39,265 crore in the estimates for the current financial year. Total governmental expenditure,

both Plan and non-Plan has gone up by 16 per cent from Rs.62,942 crore in the budget estimates for 1987-88 to Rs.73,560 crore in the budget estimates for 1988-89 The Finance Minister had to announce fresh taxation measures to net Rs. 615 crore eventhough hike in administered prices and increase in postal and telecom rates had already cost a burden of over Rs.2,000 crore on the people. Still, he was unable to contain the deficit for 1988-89, which is rather of a high order of Rs. 7,484 crore. What is even more alarming is the revenue deficit or Rs. 9,842 crore in the budget estimates of the year, which means that capital receipts, which should normally be utilised for financing infastructure, would be used to meet a part of the day to day expenditure of the Government as well

The subsidies

It should, however, be apparent to any body that reduction in expenditure is not an easy task as after-effects of the drought are yet to be taken care of. Far from undertaking any exercise to reduce subsidies, the Finance Minister, possibly by force of circumstances, was compelled to raise them by as much as 33.70 per cent, i.e. from Rs.4780 crore in the budget estimates for the current year to Rs. 6391 crore in 1988-89. The biggest increase is in fertiliser subsidy, which goes up by 57 per cent, from Rs. 1910 crore to Rs. 3,000 crore, obviously to compensate the fertiliser factories for the discount they have been directed to give to the farmers for the coming kharif and rabi sowings as part of the concessions, announced for them in the budget. What is, however, more alarming is that interest payments go up by 32 per cent to Rs 14,100 crore in the coming year from Rs 10,650 in the budget estimates for 1987-88 Interest payments would for the first time constitute the largest single component, accounting for 29 per cent of the non-Plan expenditure and 19 per cent of the total governmental expenditure. The Reserve Bank of India had recently warned the country of an impending debt trap in 1992-93. It now appears the situation may have to be faced sooner than anticipated There is ,however, only a 3.75 per cent step up in defence expenditure in 1988-89 from Rs.12,512 crore in the budget estimates for the current year. The expenditure for the current year in fact shows a decline of Rs. 512 crore, which could be due to either postponement of purchase of capital equipment by the defence forces or of payment for it. This is quite apparant as expenditure in the capital account has recorded a steep fall of Rs. 871 crore, while revenue expenditure has in fact gone up, possibly on account of IPKF operations in Sri Lanka.

Non-Plan expenditure

Besides defence, other items of non-Plan expenditure have not shown any decline during the current financial year. The total governmental expenditure has gone up in the revised estimates of the year by 5.11 per cent to Rs. 66,161 crore from Rs. 62,942 crore in the original estimates. Of the total, revenue expenditure has gove up by 7.3 per cent to Rs. 46,619 crore from Rs. 43,430 crore and as a result the revenue deficit has gone up by a whopping 20 per cent from Rs. 6,742 crore to Rs. 8,497 crore. If the overall deficit is still nearly contained to redeem the pledge given by the Prime Minister, Shri Rajiv Gandhi, while presenting the budget last year, it is because of the 6.7 per cent increase in capital receipts, from Rs. 20,566 crore to Rs. 21,959 crore in the revised estimates and negligible increase of 0.14 per cent in capital expenditure. Almost half the increase in capital receipts is from market borrowings, which go up during the year by Rs. 700 crore.Howevere,this does not appear to have resulted in any revenue gain as interest payments during the year go up by Rs. 800 crore.

Enhanced central outlay

In spite of the mounting non-Plan expenditure, the Finance Minister has found it possible to step up the Central Plan outlay by 16.62 per cent to Rs.28,715 crore from Rs. 24,622 crore in the estimates for 1987-88. This has, however, been done without stepping up the budgetary support for the Plan, which has in fact been brought down to 55.72 per cent from 60.85 per cent in the budget estimates for the current year and 62.85 per cent in 1986-87. This would have been a good trend had the Plan been financed by the resources generated by the public sector enterprises (PSEs). However, internal resources constitute merely 65.37 pe. cent of the total resources to be mobilised by them. Other elements include bonds and debentures 16.04 per cent, external commercial borrowings 4.85 per cent and other deposits 13.74 per cent However,if the past performance is any indication, internal resources of the PSEs could fall well below target. Under the revised estimates for 1987-88, internal resources contributed only 53.49 per cent of public sector Plan outlay, against a budget estimate of 63.29 per cent for the year. The shortfall was made up by increased borrowings, both internally and externally. Bonds and debentures contributed 19.78 per cent of the total public sector outlay, against a budget estimate of 15.47 per cent. Other forms of borrowings accounted for 21.32 per cent as against a budget estimate of 16.25 per cent. Even external commercial borrowings exceeded the target by 0 41 per cent. Thus, if the public sector is to meet its target for recources, it may find itself deeper in debt, much like the Central Government.

The innovation

To say all this does not, however, mean that there are no good points in the budget. That in spite of the resource constraints, the Finance Minister has been able to step up Plan allocations is itself an achievement. Then, there are the schemes to revive agriculture to promote small scale and rural industries, to bring back to health textile and cement sectors and to give a new thrust to housing, not only through additional contribution of Rs. 100 crore to the National Housing Bank for rural housing, but also through excise duty concessions for cement and for steel and aluminium door and window frames. There are a few innovative schemes for the revival of agriculture too. One of them is

(Contd. on page 22)

Union Budget, a better deal to rural poor

S. Sethuraman

The author here says that in the Union Budget 1988-89, the Finance Minister has sought to provide a better deal to small and marginal farmers, rural artisans, scheduled castes and scheduled tribes. Rescheduling of agiricultural loans, postponement of recoveries and reduction in interest rates are some of the hallmarks to boost the rural sector's participation in the national productive efforts. In addition, export promotion has received top priority in the form of cent per cent exemption of export profits from income tax.

THE UNION BUDGET FOR 1988-89 presented to Parliament on 29.2.88 by the Finance Minister Shri Narayan Datt Tiwari will have wide popular acceptance, which seems to be a deliberate political strategy, though it makes no serious effort at sound fiscal management. The budget has certainly many welcome features such as the boost it seeks to give to the agricultural sector, proposals aimed at improvement of the living conditions of poorer sections and the wide-ranging duty reductions on consumer articles. Relief has been provided to the textiles, cement and paper industries as well as the capital goods sector. The Budget, following one of the worst droughts that India has experienced in this century, has naturally focussed on agriculture, given the need to achieve a foodgrain production target of at least 175 million tonnes in two years time. Even so, many of the relief measures announced for the farmers by way of rescheduling of loans, postponement of recoveries and reduction in interest rates along with other new schemes could have come much earlier than through the Budget belatedly. The Finance Minister has devoted his budget to what he calls "people oriented initiatives" and his singular concern seems to have been to go all out to please those sections who have had a raw deal such as small and marginal farmers, rural artisans, scheduled castes and scheduled tribes. By and large, he has kept intact the fiscal policy framework by not making any change in the rate structure for personal and corporate taxes. He has certainly disappointed the corporate sector which had demanded the abolition of dividend tax and the minimum tax on book profits and a general reduction in excise duty structure. However, Shri Tiwari has promised a further amending of the recently enacted Direct Tax Laws Bill to take care of grievances of chambers of commerce, tax specialists and the general public. But the industry would still welcome the selective excise reliefs and the customs duty changes that the Finance Minister has announced to strengthen incentives for exports, housing and construction activities and technology upgradation.

Structure of budget

Before taking up the budget proposals, it would be worth-while to take a look at the structure of the budget and whether it holds out better prospects for the economy in the coming year. The 1987 drought certainly threw extra financial burdens on top of the sharp decline in agricultural production and rural incomes and the revised expenditure estimates for the current year show an increase of Rs. 3200 crore. In spite of higher tax receipts under direct taxes and customs duty and the substantial additional resource mobilisation undertaken in recent months, the overall deficit has risen to Rs. 6080 crore as against the budgeted Rs.

5688 crore. Since the last few years, the revenue deficits have been rising disturbingly and from Rs. 7776 crore in 1986-87, the figure has gone up to Rs.8497 crore in the current year while the estimated revenue deficit in the coming year is Rs. 9842 crore. This massive gap is mainly accounted for by the non-plan expenditure, the major items being Defence, Interest Payments and Food and Fertiliser Subsidies. While Mr. Tiwari has provided for an increase of only Rs. 1000 crore for Defence as against the annual average of Rs. 2000 crore for some years now, interest payments at Rs. 14,100 crore will overtake the budgeted defence expenditure of Rs.13,000crore. The food and fertliser subsidies will further rise to Rs. 5300 crore rupees in 1988-89 as against Rs. 4400 crore in the current year. The total expenditure budgeted for in 1988-89 stands at Rs. 73560 crore. Taking into account the total receipts, both revenue and capital, the deficit at existing rates of taxation is estimated at Rs. 8120 crore. The net effect of the Finance Minister's proposals would be a gain of Rs. 587 crore and taking into account, the revision of postal rates already announced of the order of Rs. 49 crore, the uncovered gap will be Rs. 7484 crore the highest ever budgeted for.

Dependent on monsoon

The Finance Minister has refrained from expressing any view about such a massive deficit at a time when the rate of inflation is nearly in double digit, nor has he expressed any note of optimism about production and growth prospects in the coming year. He has described the higher expenditure on defence, development, social services and subsidies as unavoidable compulsions. While he has kept non-plan expenditure to what he calls the barest minimum, the Finance Minister has left the problem of mounting expenditure to be dealt with in the future. On the receipts side, the Finance Minister has assumed a larger revenue growth than would seem warranted by the state of the economy. Unless there is a normal monsoon this year and agricultural and industrial production regains momentum, the revenue estimates may go off the mark. The Budget does not reduce the increasing dependence on market borrowings and external savings.

The Annual Plan provision for 1988-89, the fourth year of the Seventh Plan, has been fixed at Rs.28,715 crore which represents a 16.6 per cent increase over the approved outlay in the current year. In real terms, at the prevalent accelerated rate of inflation, the outlay would have to be even higher. As a ratio of total expenditure, the Central Plan outlay will only be 19 per cent next year as against 21 per cent in 1987-88 budget. Agriculture. irrigation, anti-poverty programmes, energy, transport and communications have been accorded priority in the allocations. The States' share of plan assistance from the Centre would be roughly the same as in the current year.

A sop to states

The new tax proposals in the Central Budget will give the states Rs. 122 crore as their share in the new excise levies but the Finance Minister's direct tax changes would deprive the states of Rs. 94 crore so that the net share of the states in the additional resource mobilisation would be a mere Rs. 28 crore. As a sop to the states, the Finance Minister has announced that the Reserve Bank of India would raise from tommorow the ways and means limits by 40 per cent over the limits prevailing prior to October, 1986. This follows representations from states about their liquidity problems in the wake of the drought

Special excise duty

As was expected, Shri Tiwari has proposed to continue with the 5 per cent surcharge on income tax, 10 per cent surcharge on wealth tax and the surcharge on auxiliary custom duty for one more year. These were brought in to meet drought relief expenditure last year. In addition, he has introduced a special excise duty in the nature of a surcharge at the rate of 1/20th of the basic duty of excise which alone would give the Central exchequer Rs. 650 crore While his other new excise levies cover petroleum products, pharmaceuticals, machinery and plastics, Shri Tiwari has offered an impressive range of concessions sacrifising revenue estimated at Rs.509 crore. His proposals would yield additional customs revenue of Rs. 370 crore and excise Rs. 239 crore inclusive of states' share. The direct tax proposals would bring in Rs. 163 crore taking the total tax effort to Rs. 587 crore for the Centre, leaving Rs. 28 crore for the states.

Promoting exports

In direct taxes, Shri Tiwari has resisted demands for raising of the income tax exemption limit beyond the present Rs. 18000 per annum but has gone to some extent in satisfying the fixed income groups by raising the rate of standard deduction from Rs. 10,000 to Rs. 12,000. It will benefit a million tax payers. Shri Tiwari has come up with a tax on transfer of wealth through inheritance especially where the volume of wealth involved is large. The tax will be levied in respect of assets subject to wealth tax. As Minister for Commerce in addition to Finance, Shri Tiwari has been taking lively interest in the promotion of exports and his incentives for strengthening the export effort would be well received. In order to make export activity profitable for those engaged in earning foreign exchange for the country, Shri Tiwari has decided to exempt 100 per cent of export profits from income tax.

Relief to farmers

Shri Tiwari's sweeping package for farmers includes a reduction in the rate of interest on crop loans by one and half per cent to two and a half per cent. additional bank credit to agriculture by Rs. 3000 crore in 1988-89, a cut in the price of urea by Rs. 8 and 80 paise per bag and reduction in import duties on selected pesticides and other items. He has announced the setting up of a National Agricultural Credit Relief Fund, special programmes to assist marginal farmers in installing

(Contd. on page 22)

Is Railway Budget for 1988-89 pragmatic ?

Arabinda Ghose

The Railway Budget for 1988-89 was presented in the Lok Sabha by the Railway Minister, Shri Madhav Rao Scindia on February 24, 1988. The new proposals would net Rs. 622 crore and will leave the Railways with a surplus of Rs. 28 crore. The author here examines the various proposals in the Budget and feels that not enough has been done for electrification of some important heavy-traffic tracks.

RAILWAY MINISTER, Shri Madhav Rao Scindia's second budget, presented to Parliament on February 24, 1988 proposes to raise a total of Rs 622 crore in 1988-89 in one go by raising both passenger fares and freight rates. One of the largest resource mobilisation efforts in the history of Railways, the budget proposes to raise an additional Rs. 358 crore by raising passenger fares, Rs. 241 crore from an across-the board freight rate increase of 6 per cent except on certain items, and another Rs. 23 crore by raising parcel and luggage rates by 10 per cent.

The surplus

These imposts along with the anticipated growth in traffic will raise the gross traffic receipts of the Railways from the revised estimate of Rs 8474.00 crore in 1987-88 to a new high of Rs 9393.00 crore indicating that by the following year, the Railway budget will toch the Rs. 10,000 crore mark After meeting ordinary working expenses and allocations to various funds, the Railways were left with a deficit of Rs 594 crore because of the dividend liability of Rs. 736 crore to the central revenues. The new proposals to raise a total of Rs 622 crore will leave the Railways with a surplus of Rs. 28 crore, after payment of full dividend.

This time, the Railways Minister has taken a bold although unpopular step of raising more resources from passenger traffic and has not spared two sectors of passenger services which were avoided in the past–the short distance passengers travelling by second class ordinary trains and the commuters in big cities travelling on monthly season tickets at very low tariff. The extent of hikes on passenger tickets can be gauged from the fact that the total additional income from this measure is expected to be Rs. 358 crore compared to only Rs 247 crore from freight. Besides, the additional revenue collection from pasenger traffic in 1988-89, including that from normal traffic growth amounting to Rs. 419 crore, will be largely the impact of this factor. The revised estimate for 1987-88 shows that earnings from passenger traffic will be of the order of Rs. 2027 crore, while total passenger earnings in 1988-89 has been estimated at Rs 2446.00 crore

Who will pay more

The second class mail/express fares, the real money spinners for the passenger services, will fetch a total of Rs. 1307.47 crore in 1988-89 compared to the revised estimate of Rs. 1097.72 crore in 1987-88, showing that this class of passengers will contribute Rs. 209.75 crore out of Rs.358 crore proposed to be raised by raising passenger fares plus Rs.53 crore more from traffic growth.The second class ordinary passengers will give another Rs.159.59 crore.The upper class passengers will contribute only Rs.49.66 crore.

However, the first, the air-conditioned two-tier sleeper and the air-conditioned class fares were already raised from November 1, 1987 as drought relief which will continue while there has been another 10 per cent increase, over and above the Nov. 1 raise, in case of first class air-conditioned class. Travel by this last category of accommodation will be almost as costly, or even more, in certain cases, than the air fare between the similar pairs of cities.

The hikes in the case of second class mail/express travel have been quite high, the maximum being Rs.15 per ticket in case of travel beyond a distance of 750 kilometres. Since the reservation charges for this class have also been raised from Rs.2 to Rs.5 per ticket, the actual impact will be of the order of Rs. 18 per ticket.

Season ticket holders will also pay more from Rs. 4 to Rs. 8 per ticket per month in case of second class travel. This measure will raise another Rs. 4173 crore (including earnings from anticipated growth of traffic) from the revised estimate of Rs 200.60 crore in 1987-88 to Rs. 242.33 crore in 1988-89.

Platform tickets will cost when the new imposts are implemented from April 1, Rs. 1.50 each, a rise of 50 paise per ticket.

Hike in freight

Since the Railway Minister has decided not to raise the freight rates in respect of foodgrains, fertilisers, edible oils, salt for human consumption, fodder, livestock, gur and jaggery, the impact of the six per cent hike will be felt on coal, iron ore, mineral oils, iron and steel mainly Interestingly, the prices of coal and steel have been recently increased by the Government. Thus freight hike in coal alone will fetch the Railways an additional Rs. 244 20 crore (including the earnings from anticipated growth in traffic) out of the total increase of Rs 469.00 crore in freight traffic receipts from the revised estimate of Rs.6060.00 crore for 1987-88 to the budget estimate of Rs.6529 00 crore for 1988-89 The steel sector raw materials for steel plants, finished products from steel plants and iron ore for export-together will account for another Rs. 99.85 crore increase while cement will account for another Rs. 12.20 crore.

Interestingly, although petroleum, oil and lubricants (POL) have not been excluded from the purview of freight increase, actually a fall in income is anticipated in its case, from Rs. 690.00 crore in the revised estimate of 1987-88 to Rs. 669.35 crore in the budget estimate of 1988-89 Again, although there is no raise in foodgrains freight rates, the earnings from this item are expected to go up during this period from Rs. 647.00 crore to Rs. 652.70 crore and for fertilisers, from Rs. 338.00 crores to Rs. 377.30 crore.

The funds

Mr. Scindia has appropriated as much as Rs. 1500 crore for the Depreciation Fund (DRF), which is a measure of his concern for the health of the system as it is mainly from this fund that the outlays on renewal and repair of assets are made. This is also in accordance with the recommendation of the Railway Convention Committee of Parliament

There is an obvious need for appropriating more for the Pension Fund for which Rs. 550 crore have been appropriated this time. The Operating ratio is slightly higher this time—92.8 per cent, than 92.5 per cent in 1987-88 (revised estimate).

Higher plan allocation

Although the Minister has proposed to collect such a massive amount in just one year, mainly because he had refrained from levying any addititonal imposts last year, he has also decided to raise the plan allocations for the Railways in 1988-89 from the Rs. 3300 crore during the current year to Rs.3850 crore this year. Track renewal gets the same priority in 1988-89 too as in the past year, with an allocation of Rs, 862.14 crore up from Rs. 810.19 crore. Rolling stock will be given Rs. 552.60 crore (against Rs. 347.43 crore), doubling of tracks Rs. 230.76 crore (Rs.170.04 crore in 1987-88), electrification projects Rs. 180.30 crore (against Rs. 183.23 crore), workshops including production units Rs. 325.32 crore (against Rs. 193.80 crore), traffic facilities like yard remodelling Rs. 188.90 crore (against Rs. 145.33 crore), signalling and telecommunication Rs. 105.79 crore (against Rs.94.96 crore), bridge works Rs.80.58 crore (against Rs.54.96 crore) and machinery and plant, Rs 75.00 crore (against Rs. 59.48 crore).

Of Rs. 3850 crore for the Railways' plan allocation, as much as Rs. 800 crore are to be or have been raised through market borrowings by the Indian Railway Finance Corporation (IRFC) which has raised through two instalments of bond issues, a total of about Rs. 960 crore. A third series is likely to be issued by the end of 1988 or early 1989

One of the notable features of the budget is its decision, like in the previous years, not defer the payments of dividends to the central revenues and to that extent, is its contribution (Rs.736.00 crore) to the general revenues In fact, one might mention here, this amount has kept the overall additional resource mobilisation by the Finance Minister, Shri Narayan Datt Tiwari, to only about Rs. 545 crore in 1988-89. (The increase in the administered prices of coal, steel, petrol and the hikes in the telecommunication and postal rates have also helped Shri Tiwari keep down the incidence of additional taxation).

Highest wagons haulage

Shri Scindia pointed out in his budget speech that the utilisation of wagons on the Indian Railways has become the highest in the world. A wagon (in terms of four wheelers) now clocks 1420 net-tonne-kilometres (NTKM) per day (which means that a wagon carries a payload of one tonne over a distance of 1420 kilometres in 24 hours). This figure at the end of 1986-87 must have increased by now and thus is way ahead of the target of 1350 NTKM in the terminal year of the Seventh Five Year Plan. Only about three years ago, this figure was just 1150 NTKM.

Track electrification

The budget speech also mentioned about the electrification projects and said that the Bombay Central-New Delhi route via the Western Railway was now fully electrified. This is the second trunk route to be fully electrified, the first being the Howrah-Delhi route, completed in 1976. The Delhi-Madras, the Bombay-

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Our economy strong enough to face all odds

The pre-budget survey of the performance of the country's economy during the year 1987-88 was presented to Parliament on February 26, 1988. It said, though the countrywide drought of 1987 caused a temporary setback to the momentum of development and posed fresh challenges to economic management, the inherent strength of the agricultural economy, growing resilience of industrial and other non-agricultural sector and emergence of healthy trends in foreign trade were the strong points of the recent economic performance. The survey observed that a durable solution to the underlying fiscal problems must be pursued through curbs on the growth of current expenditure, broadening the base of revenues and further improving the financial performance of public sector enterprises. Given below is the resume of the economic survey.

THE PRE-BUDGET ECONOMIC SURVEY for 1987-88 was presented to Parliament on February 26, 1988. The Survey observes that the countrywide drought of 1987 caused a temporary setback to the momentum of development, posed fresh challenges to economic mangement and highlighted some of the underlying strengths and weaknesses of Indian conomy. Economic management during the 1987-88 had focussed on drought and its impact, with a comprehensive package of policies having been worked out and implemented across a wide front in order to contain the adverse effects of natural calamities.

According to the Survey, the strong points of recent economic performance included inherent strength of the agricultural economy despite successive years of bad weather, growing resilience of the industrial and other non- agricultural sectors to disruptions in agriculture, the ability to maintain the tempo of infrastructure development in the face of adversity, the emergence of healthy trends in the foreign trade account and a capacity for responsive economic management in the face of massive and unanticipated changes in the economic environment.

Depite the severe drought and floods, the survey anticipated that GNP would show a positive growth of around 1 to 2 per cent last year. The survey attributed this relative stability of the economy in the face of severe drought to a combination of factors including the diversification, over time, of the economy, the availability of large food stocks at the begining of the drought and an array of timely policy interventions undertaken to minimize the adverse impact of the drought.

Agricultural production

The survey noted that the drought last year was one of the worst on record, with as many as 21 out of a total of 35 rainfall sub-divisions in the country receiving deficient or scanty rainfall. Coming at the end of a run of four poor monsoons, the drought had a serious adverse impact on crop production especially in the Kharif belt which was still heavily dependent on rainfall. While official estimates of total agricultural production for the current year would not be available for some time, the survey expected production to decline by 7 to 10 per cent from the previous year's level. A similar order of shortfall was anticipated in total foodgrain production for the year.

Despite a sharp decline in agricultural production, the Survey pointed out that it was possible to maintain higher releases of foodgrains through the Public Distribution System, employment programmes, relief programmes and other channels because of the large

food stocks of over 23 million tonnes which had built up by June, 1987. This formed the backbone. Other steps included immediate measures to minimize Kharif crop losses, augmented allocation of resources for irrigation, accelerated completion of on-going projects and a campaign to maximize rabi crop production by ensuring adequate supplies of major inputs, including provision of power for agricultural use on a priority basis and supply of credit for raising a second crop.

Industrial performance

Despite the adverse consequences of the drought, the Survey noted the highly satisfactory performance of industry during the first 8 months of 1987-88 for which data were available (April-November, 1987) During this period the industrial sector as a whole achieved a growth rate of 10.2 per cent, which was significantly higher than the growth rates of 8.5 to 9 per cent attained during the corresponding period of the previous 3 years, which were themselves much higher than the growth achieved in the first half of this decade and earlier. The manufacturing sector showed an even higher growth rate of over 11 per cent in the first 8 months of the current year Even allowing for some expected slow down in industrial activity in the final third of the financial year, the Survey expected that industrial growth for the full year would exceed 8 per cent

This resilience of our industrial growth, especially when compared to earlier years of serious drought, is attributed by the Survey to a combination of robust proformance of infrastructure, the policy initiatives taken in recent years to enhance industrial productivity and the longterm change in the structure of both the economy and industry, which had reduced dependence on agriculture. However, the Survey cautioned that the contractionary effects of the drought on industrial production were likely to make themselves felt more fully in the final months of the financial year 1987-88 and the first few months of 1988-89.

Infrastructure

As noted by the Survey, robust performance of the infrastructure sector in the past year was key positive factor which contributed to strong industrial growth and facilitated the implementation of various measures in the field of energy and transportation aimed at reducing the economic costs of drought. Although hydel power generation fell sharply because of rainfall scarcity, this was compensated for by strong 15.7 per cent growth in thermal power generation during the first nine months of 1987-88. As a result, total power generation increased by 7.6 per cent in April-December, 1987 over the corresponding period of 1986. The Survey commended the fact that Plant Load Factor (PLF) of thermal power plants increased to 55 per cent during the year. Coal production increased by 10.2 per cent in April-December, 1987. Railway freight movement was also satisfactory, recording a growth of 5.4 per cent in the first nine months of 1987-88.

To ensure adequate growth of infrastructure services in the context of a tight resources situation, Survey deemed it vital to secure high rates of economic return per unit of investment, as well as to generate enough investible surpluses for financing further necessary expansions.

Prices

As indicated in the Survey, prices came under pressure right from the begining of this year as a consequence of the poor weather and shortages of some essential agro-based commodities experienced during 1986-87. These pressures were further aggravated from July, 1987 with the onset of the severe drought.Up to the third week of January, 1988 the wholesale Price Index (WPI) had registered an increase of 9.8 per cent on a point-to-point basis, since the end of March, 1987. The consumer Price Index (CPI) showed an increase of 9.6 per cent upto December, 1987 The Survey pointed out that price increases had been particularly high for items of agricultural origin such as edible oils and oilseeds, condiments and spices, cotton, pulses, gur khandsari and cereals. The driving force behind inflation during 1987-88 had been the shortfall in agricultural production because of drought.

The Survey stated that since the basic inflationary pressure had arisen because of a shock to supply, the main plank of anti-inflationary policy had been the effective supply management. The maintenance of adequate supplies of food through the Public Distribution System and other channels had been the backbone of supply management policy. This had been buttressed by policy of restrained monetary expansion and fiscal policies aimed at checking the size of the budgetary deficit despite massive increase in drought and flood relief expenditures. As a result of these measures, the Survey stated that though the price situation remained difficult the rate of inflation has been lower this year than in other years of severe drought.

Fiscal and monetary policy

As described in the Survey, fiscal policy endeavoured to maintain the priority for development despite the secular and short-term pressures on Government finances. Faced by the sharply expanded responsibilites for relief expenditure due to drought and flood, the Government announced a number of revenue and resource-raising measures in September,1987. Administrative efforts to improve revenue collections were also stepped up. The basic goal, according to the Survey, was to find enough expenditure without cutting back on the public investment resources to finance the additional relief programme or risking a large increase in the budget deficit.

The Survey also provided a detailed description of the important measures announced in the Central Government Budget for 1987-88, including the extension of MODVAT system in excise taxation to most sectors, fiscal and other initiatives to promote

housing, a new scheme for savings, a massive increase in the plan allocation for the education sector and continued high priority for programmes aimed at poverty alleviation and infrastructure development.

The Survey observed that the monetary and credit policies over the year were conditioned, on the one hand, by the need to restrain monetary growth so as not to aggravate the inflationary pressures of drought and, on the other hand, by the need to avoid unduly recessionary consequences of excessive monetary restraint. In the light of these broad gruidelines the Statutory Liquidity Ratio (SLR) was increased twice during the year and the Cash Reserve Ratio (CRR) was raised once. Selective credit controls were tightened between July-October for a number of drought affected commodities. At the same time, more liberal credit facilities were made available to drought-affected farmers.

Balance of payments

The Survey drew attention to the strong export performance of the past 2 years which was attributed to the measures taken by the Government in 1985-86 and 1986-87 After recording an increase of 15.3 per cent in 1986-87, exports grew by 24.6 per cent in the first 9 months of the current year, as compared to the corresponding period of the previous year. In contrast, imports grew by 2 2 per cent in 1986-87 and 13 5 per cent in April-December, 1987 In consequence, there was a further decline in the trade deficit in the first 9 months of 1987-88.

Nevertheless, as anticipated in the Economic Survey of the past several years, the balance of payments continued to be under strain because of a number of adverse medium-term factors such as the deceleration in the growth of indigenous oil production, growing protectionist tendencies abroad, the bunching of repayment obligations to IMF and other creditors and the unfavourable climate for concessional assistance The Survey pointed out that these pressures were aggravated in the current year by the rebound in international oil prices and the occurrence of drought which led to substantial additional imports of essential commodities such as edible oils and pulses The Survey cautioned that the adverse consequences of drought on imports and some agricultural exports might not yet be fully reflected in the trade data available for the first 9 months of the years.

Problems and prospects

Looking ahead, the Survey emphasised the need to pursue, with renewed vigour, a long-term strategy for reducing the vulnerability of agriculture to adverse weather conditions. Elements of this strategy would include rapid expansion of the area under assured irrigation, measures to swiftly close the large gap between irrigation potential and its utilisation, improvement in water management systems, emphasis on appropriate cropping patterns, systematic efforts to improve utilisation of ground water potential, and programmes of afforestation and ecological renewal. The Survey added that the fluctuations in agricultural output also stemmed from concentration of recent agricultural development in a few States and regions. It was therefore, essential to move towards a more dispersed pattern of agricultural development. For this, the Survey advocated special emphasis on provision of irrigation, land development and other agricultural infrastructure in those regions where agriculture has lagged behind.

In the industrial sector, the Survey envisaged the task ahead to be one of ensuring that the virtuous combination of industrial policies and infrastructural performance, which had generated four years of rapid industrial growth, was maintained and measures were taken to bring about further improvements in industry's international competitiveness. In the context of scarce investible resources, the Survey underscored the special value of productivity increases in infrastructure sectors, since these sectors tended to be highly capital intensive Particular importance was attached to further increases in the plant load factors of our power stations, additional improvement in the operational efficiency of the railways and measures to increase the efficiency of energy use in the economy.

The Survey observed that the continued rapid increase in current Government expenditures posed serious risks for inflation and our ability to attain public investment goals in real terms According to the Survey, a durable solution to the underlying fiscal problems, must be pursued through curbs on the growth of current expenditure, measures to broaden the base of revenues and steps to improve further the financial performance of public sector enterprises A strategy for reducing the growth of Government expenditure must, in the Survey's view, encompass several elements including, ruthless pruning of programmes of doubtful economic and social merit, moderation in the growth of wages and salaries, reduction in the growing bill of subsidies through better efficiency and a clear priority in favour of completing ongoing programmes in time as compared with launching of new schemes.

Like the Surveys of the past several years, last year's Economic Survey highlighted pressures on the balance of payments. It felt that the successful management of the balance of payments situation, in the medium term, was critically dependent on rapid and sustained growth in exports and efficient import substitutions. For sustaining the recent successes on the export front, the Survey believed that it was essential to improve the quality and price competitiveness of India's manufactured production. In this important sense, the Survey regarded the viability of India's balance of payments to be dependent on the growth and efficiency of industrial production. The Survey also called for special efforts to curb the rapid growth of consumption of petroleum products and for measures to seek savings in imports. In regard to the financing of balance of payments, the Survey underscored the importance of keeping recourse to commercial borrowings within prudent limits.

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How can Centre-State financial relations remove regional imbalance

C.H. Hanumantha Rao

Shri C.H. Hanumantha Rao, a renowned economist and former member of Planning Commission, delivered the first lecture of Dr. Zakir Hussain Memorial lecture series in New Delhi on February 8, 1988, on the theme. 'Centre-State Financial Relations-National Economic Integration'. Here he pleads for increasing grants-in-aid for States after providing for appropriate escalation every year. According to him, the poor States are always at disadvantage in the present system. In the matter of Central assistance to States, the present criteria of 'tax effort' and 'population' need to be revised. Because, Shri Rao feels, for bringing about economic integration also regional imbalances must be removed.

WITH THE APPOINTMENT OF the Ninth Finance Commission, the debate on major issues having a bearing on Centre-State financial relations has been revived and people at large have been evincing keen interest in this dedate. Such periodic debates have become a part of our national life for nearly four decades now. Those who are unaware of this healthy tradition are apt to feel uncomfortable over what might be misconstrued as a sudden deterioration in the Centre-State financial relations. As can only be expected, the successive Finance Commissions have been quite responsive to such debates. These discussions have helped to clarify the relevant issues and to arrive at solutions generally acceptable to the States as well as the Centre. The experience of the working of our polity in this respect reaffirms the inner strength of our Constitution—its imaginativeness as well as its resilience—and immense potential inherent in our democratic framework for bringing about a consensus on major issues affecting Centre-State financial relations.

Apprehensions and misgivings

There is no reason to believe that the controversies aroused on the subject this time are sharper than on similar occasions in the past. However, there is some difference in regard to the nature of issues raised this time. In particular, many eyebrows have been raised on the terms of reference given to the Ninth Finance Commission, including the wording for these terms of reference

To begin with, let me say a few words on the 'wording' of the terms of reference. Under the sub-clause (C) of clause (3) of Article 280 of the Constitution, the President can refer any other matter to the Commission in the interests of sound finance. Accordingly, from the Fifth Finance Commission onwards, the terms of reference under this sub-clause spelt out various factors which the Commission "shall have regard, among other considerations,to" while making their recommendations. But it is alleged that this time, the use of the word 'Shall' in para 4 of the terms of reference has been freed from the qualification, "among other considerations." This wording has led to the apprehension in some quarters that the considerations set out could be interpreted as being in the nature of directives to the Commission rather than mere guidelines as in the past.

I am not an expert on legal matters. Certainly, I can not arrogate to myself such skills in the presence of the distinguished Chairman for this meeting. However, as a

layman and as one who had to grapple with such terms of reference twice earlier, I do not think that the wording of the present terms of reference imposes greater constraints on the Commission than on earlier occasions. For example, para 4 (ii) of the present terms of reference starts with "have regard to the need for", and para 4 (iv) starts with "keep in view the objectives of", which to my mind, suggest that these terms of reference are in the nature of guidelines rather than as specific directives. Even in Para 4 (i) where the Commission has been asked to adopt a normative approach in assessing the receipts and expenditure on the revenue account, it has been stipulated that in doing so the Commission shall keep in view the special problems in each state, if any, and the special requirements of the Centre This keeps the door open for the Commission to moderate, in the light of the special problems and requirements, its own assessments arrived at on the basis of such of the norms as the Commission may, in its wisdom, decide to adopt.

Serious misgivings have also been expressed about the terms of reference asking the Commission to adopt the normative approach in assessing the receipts and expenditures. In the past, the Finance Commission did adopt certain norms in assessing the receipts and expenditures submitted to them by the States and the Centre. Consequently, the estimates finally accepted by the Commissions diverged significantly from those originally submitted by the government concerned. Adoption of norms is inevitable in any exercise designed and between States on the one hand and the Centre on the other. What makes the difference this time is that the terms of reference specifically ask the Commission for the first time to adopt the normative approach However, this very fact need not give rise to apprehensions by investing much more meaning into the normative approach than what the previous commission have been trying to evolve. After all, this is not the first time that the practices followed by the Finance Commission in the past have been formalised into terms of reference for the succeeding Commissions. Besides, the Finance Commissions have been conscious of their Constitutional position and have accordingly been giving their fullest consideration to the viewpoint of the States with an open mind before taking a final view on vital issues affecting Centre-State financial relations.

Even so, there are at least two substantive issues referred to in the terms of reference which have caused justifiable misgivings. First, contrary to the well-establised convention following the recommendations of the Fourth Finance Commission, the terms of reference for the ninth Commision do not make any distinction between the plan and non-plan while asssing the receipts and expenditure on the revenue account. So far, the revenue component of the plan expenditures as well as additional resource mobilisation have been dealt with as part of the plan exercises. The Finance Commission will now have to project the revenue component of plan exenditure as well as additional resource mobilisation for the period of its award as part of its assessment of revenue expenditure and receipts. The emerging deficits, if any, after the devolution of taxes, will have to be covered through grants-in aid under Article 275 of the Constitution. This would necessitate a change in the revised Gadgil Formula for plan assistance to States under which 30 per cent of assistance is given as for meeting the revenue component of the plan expenditure.

Therefore, it can be legitimately argued that the position and powers of the National Development Council-the highest body entrusted with the fomulation and finalisation of Plans-are undermined in the first instance by taking away the revenue component of the Plan from its purview without its prior constent, and then by the prospect of confronting it with no alternative but to change the Gadgil Formula. Now, this may be entirely constitutional and the purists who regard Planning Commission as an extra-constitutional ventures may admire the way the area of operation of the Planning Commission has been trimmed by a stroke of pen !

However, the issues involved are not just formal but are basic to our development process. Revenue component of the Plan is intertwined with the capital component and both are jointly determined by the size of the Plan and its priorities. The plan exercises in their very nature are quite different from thsoe which can be undertaken by the Finance Commission under the existing arrangements within a short period of time The rescource mobilisation scenarios for the Plan can not be divorced from the questions such as the relative importance to be assigned to the public and private sectors, inter-sectoral priorities for public investment and the goal of income distribution, price policy etc These are formulated in the light of the emerging economic situation in the country and abroad. Further, these are modified from time to time through the mechanism of Annual Plans in response to the changing internal and external economic environment The elaborate exercises on the economic performance and the potential of the nation together with the prevailing political perspectives and political will, determine the size and content of the Plan. Revenue component of the Plan can not, therefore, be treated either as an extrapolation of the past trends into the future or as projections on some normative basis independent of the considerations which determine the plan-size and its content.

Since the Ninth Finance Commission has been asked to assess and provide for the revenue component of the next Plan before the Plan itself is ready, such forecasts can at best be regarded as tentative to be supplemented, if not modified, by the National Development Council, if economic planning for the country is to be continued as a serious venture. The Ninth Finance Commission, is, therefore, faced with a delicate task of reconciling the responsibilities enjoined on it by the terms of reference with the imperatives of Planning. As a pratical way out, it should be possible for the Commission to provide for certain minimum requirements on account of revenue component of plan expenditure and make appropriate

recommendations for its supplementation so that the National Development Council can formulate the Plan including its revenue component with due flexibilty without encountering the constitutional hurdles. We have every reason to accept that a constitutional body of this status will come out with a reasonable solution to this problem.

Another matter of genuine concern to the States relates to paragraph 7 to the terms of refernece asking the Ninth Finance Commission to examine the feasibility of the merger of additional duties of excise in lieu of sales tax with basic duties of excise. The levy of additional duties of excise on certain specified goods was the result of an agreement reached in the National Development Council as far back as 1956 by which the States agreed to refrain from exercising their power to levy sales tax on such goods, in lieu of a share in additional duties of excise to be levied by the Centre The above agreement even envisaged that the revenues from additional duties of excise may be distributed among States on the basis of the consumption of the goods concerned. The NDC decided to refer the matter to the Finance Commission for evolving the indices of consumption. Accordingly, the sucessive Finance Commissions have been recommending criteria for distribution based on consumption. I do not want to go into the larger question of how this agreement has ben implemented and the grievances of the States in this regard. The real question at the moment is that the agreement in vogue for over 3 decades between the States and the Centre is sought to be reopened unilaterally without counsulting the National Development Council. Again, one can not perhaps question the legality of such a reference to the Finance Commission. One can not also question the need for an expert examination of this issue. But this could have been done through the initiative of NDC without disregarding a well-established convention and giving rise to avoidable misgivings among the States. It would be an act of statesmanship if, even at this stage, the whole matter is placed before the NDC for its consideration. Alternatively, let us only hope that the recommendations of the Finance Commission in this regard will be placed before the National Development Council for its opinion before a final decision is taken. Let me add that the Ninth Finance Commission's own recommendation in regard to the procedural matter can contribute to restoring the confidence of the States.

Distribution of resources

The Finance Commissions have been esssentially concerned with the distribution of resources, between the Centre and States, and among the States inter se. All the exercises done by the Commission find their ultimate relfection in such a sharing of resources. However, the impact of the Finance Commission awards on the total revenues available to the nation has not received the attention it deserves. This question assumes special significance now because a high proportion of sharable revenues, i.e., from income tax and union excise duties is already being allocated to States. The States' share is now as high as 85 per cent in the case of income tax and 45 per cent in the case of union excise duties. The growth of revenue from income tax has slowed down considerably over a period of time. Even the growth of revenue from union excise duties has slowed down particularly after the Seventh Finance Commission raised the States' share from 20 per cent to 40 per cent. The experience with the growth of revenues from these two taxes clearly suggests that unless the authority entrusted with levying and collecting a tax has a substantial share in it, it may not be possible to ensure a reasonable growth of such revenues. Just as a steep increase in the tax rates can become counter-productive because of the resulting incentive for avoidance and evasion on the part of individuals, a steep rise in the share of the States from individual tax can become counter-productive as the authority levying and collecting such taxes can slacken its efforts and concentrate on alternative sources which are more productive from the point of view of its own revenues.

The slowing down of the growth of revenues from thes two major taxes has also undermined the objective of equity because it is well-known that the incidence of both the taxes is progressive not only as between different income groups but also as between the high income and the low regions. The resulting sluggish growth in tax-ratio, that is, the proportin of tax revenues to national income, has been responsible, in part, for the growing fiscal imbalance in the system. The relative dependence on borrowing from public has been increasing at a fast rate and may soon reach unacceptable levels. A time, has therefore, come for taking a fresh look at the reasonableness of relative shares of the Centre and States from individual taxes in the interests of revenue, equity and overall fiscal balance.

Recourse to grants-in-aid

The requirements of States can not, however, be ignored in this process. A time has come when the objective of rational sharing of revenues from individual taxes can not be achieved without enlarging the sharable sources of revenues. The successive Finance Commissions have been recommending that revenues from corporate tax should be made sharable with States through an appropriate amendment of the Constitution. It has also been suggested that the revenues from the surcharge on income tax should be made sharable, if the levy of surchage extends beyond the period for which it is originally levied on account of special circumstances. The States have in general expressed their willingness to accept a lower share from the income tax if there is a compensatory sharing of revenues from new sources.

So far as the Ninth Finance Commission is concerned, the options open to it are necessarily limited. It can not lower the existing share of States from the two major sources without causing major financial stress for them. Nor is there any scope for a steep hike in the share even in the case of union excise duties without jeopardising the fiscal objectives stated earlier. There has, therefore, to be greater recourse to grants-in-aid under Article 275. In any case, there is likely to be a greater

resort to such grants if the revenue component of plan expenditure is to be provided. Since recourse to grants-in-aid has to be made in lieu of shares in tax revenues which are buoyant, that is, they rise in response to rise in national income and prices, grants-in-aid have to be raised to take account of the possible rise in prices. The Eighth Finance Commission had provided for an escalation of 5 per cent per annum in the amount of grants-in-aid. The escalation has to be steeper now, especially if we take into account the fact that annual plan assistance to States shows some response to the changing price situation.

In my view, there is a further justification for greater reliance on grants-in-aid. After the increase in States' share from the union excise duties to 40 per cent, there was a clear slow down in the growth of revenues from this source and a significant increase in non-tax revenues, especially through the increase in administered prices. I personally feel that the increase in administered prices were justified not only on grounds of revenue mobilisations, but also from the point of view of equity and efficiency of resource-use. The buyers or users of goods and services should be made to pay at least their cost-price, particularly when they can afford to pay, instead of expecting the general tax payer to pay for them. Besides, economy on the use of scarce resources, especially those involving huge expenditure of foreign exchange, can be ensured only by charging economic prices. What I am suggesting is that like non-tax revenues, there is a case for rise in tax revenues also. One need not substitute the other. Since the State revenues have not grown adequately on account of slowing of the growth of Central revenues from sharable taxes, there is a case for increasing grants-in-aid for them after providing for appropriate escalation every year.

Decline in Central revenue

There is a view that the Centre's deficit on revenue account started increasing because the States' share in union excise duties was raised from 20 per cent to 40 per cent by the Seventh Finance Commission. This proposition does not seem to be borne out by facts. The Finance Commission transfers to the states as per cent of gross revenue receipts of the Centre stood at 22.1 per cent in 1974-75, that is, well before the award of the Seventh Finance Commission. It is true that this share rose to 25 per cent in 1979-80 as a result of this award. As I said earlier the growth of revenue from union excise duties and income tax slowed down whereas non-sharable tax revenue and non-tax revenues of the Centre showed a greater increase. Besides, in view of the larger devolution of taxes the relative importance of grants-in-aid declined even on the basis of Seventh Finance Commission's award. The net result of these developments was that the Finance Commission transfers to States as a proportion of Centre's revenue receipts came down to 22.4 per cent in 1982-83, that is, before the award of the Eighth Finance Commission. Thus their share was the same as obtained before the award of the Seventh Commission. The growing deficit of the Centre on revenue account is attributable not to the rise in States' share from Centre's revenues but to the slow growth of tax revenues of the Centre and a steep rise in its non-plan expenditure, including particulaly interest payments and subsidies.

Vertical equity

Whereas the Centre's growing deficit on revenue account can not be explained by the transfer of revenues from the Centre to the States, it is necessary to dispel the notion that the States' tax revenues are less elastic than those of the Centre, that the States' share in the overall tax revenues of the nation has been coming down or that the total expenditure incurred by the States in relation to that incurred by the Centre has been going down. The available evidence clearly shows that the States' tax revenues have been already as elastic as those of the Centre, the share of the States in the total tax revenues of the nation, after devolution, has been steadily increasing and that the States' share in total revenue expenditure and plan expenditure has not shown declining trend.

The taxes levied by the Centre as percent of total tax revenues varied between 67 to 70 per cent since 1961-62 without any discernible trend of an increase or decrease in this ratio. Correspondingly, the share of taxes levied by States fluctuated between 33 per cent to 30 per cent during this period. It can not, therefore, be asserted that Centre's tax sources are more elastic than those of the States. The devolution of tax revenues to the States as per cent of gross central tax revenues increased steadily from about 17 per cent in 1961-62 to around 28 per cent in early 1980s. As a result of this, total tax revenues of States, that is, those levied by them plus those accruing to them as a result of devolution from the Centre, as a proportion to total tax revenues in the country have shown a rise from around 43 per cent in early 1960s to around 52 per cent in early 1980s. The share of the States in the total revenue expenditure varied from year to year between 52 per cent to 56 without any discernible trend since 1960-61. The actual plan expenditure of the States approximated between 48 per cent to 50 per cent of the total plan expenditure during much of this period. It is, therefore, difficult to maintain that equity as between Centre on the one hand and States on the other, or what is usually termed as vertical equity, has deteriorated over a period of time in regard to public revenues and expenditure.

Horizontal equity

As regards horizontal equity, i.e., the pattern of distribution of resources as between the developed and the less developed States, there is a clear evidence of an improvement in the last decade, at least in so far as Finance Commission transfers are concerned. Only about 25 per cent of sharable pool of revenues both from income tax and union excise duties is now divided among States on the basis of popluation and the remaining 75 per cent is distributed on the basis of criteria which distinctly favour less developed States or those whose per capita income is below the national average. In principle at least, the major inequity still

persisting in the formula, to my mind, is the distribution among States of 10 per cent of the net collection from income tax on the basis of contribution. I do not want to elaborate on the well-known arguments against this criterion but considering the trends in the Finance Commission devolution in the recent period, whose progressivity is generally acknowleged, I very much hope that the factor of contribution would soon wither away from the formula of inter-State distribution.

Examining progressivity

Whereas Finance Commission transfers have of late become somewhat progressive, the real question is whether these transfers are sufficiently progressive considering the needs of the less developed States. In forming an appropriate judgement on this issue, I think, one has to keep three basic coniderations in mind. First the historical neglect of some regions in the colonial period. For nearly a century and half during the colonial period certain regions in the country, particularly in the estern part, were drained of resources through permanent settlement and the resulting expropriatory land tenure systems. In the colonial period, there were no pressures such as we find now in an independent and democratic polity, against regional inequities in regard to the mobilisation of resources as well as investments in infrastructure As a result we inherited from the colonial period sharp inequalities as between different regions in the endowments of institutional and physical infrastructure like land tenure systems and irrigation development The economic integratin of the county following independence created a vast national market through the development of transportation and communications The regions already well-endowed with infrastructure have been able to derive greater advantage from the emergence of a national market for goods and services

The second factor which needs to be kept in mind is that the devolution of resources by the Finance Commissions to the backward States for at least two decades after independence was lower in per capita terms than for developed States. This fact has been well documented in the literature on the subject This was the period when the cost of building infrastructure was low. The progressivity in the distribution of resources witnessed in the recent period could not have neutralized the impact of regressive distribution for over two decades, not to speak of the inequalities inherited from the colonial period.

The third factor is the inter-regional flow of resource, on private account. The growing migration of unskilled labour on a large scale from the backward to the developed regions and the lower credit-deposit ratios in the backward regions indicate the higher profitability of investment in the developed regions on account of infrastructural advantages. The inter-regional flow of resources is no doubt desirable upto a point in the interest of efficiency as wll as equity. But if such a flow of resources arises essentially from the lack of infrastructure in the less developed regions where the potential for development exists at a low cost to the economy, then it would not be efficient or equitable from the dynamic or long-run point of view.

The less developed States in the central and eastern India acount for about two-thirds of the country's population below the poverty line and nearly 70 per cent of the poor belonging to scheduled castes and scheduled tribes in the country. Experience in the last decade shows that the States experiencing a higher than average rate of growth in per capita income have been able to bring down their poverty ratio at a faster rate than the States where the growth in per capita income has been below the national average.

Growing regional disparities

Let us look at the growth performance of the poorer States vis-a-vis the richer States over the plan period. In the early 1960s the per capita income (State domestic product) of the richer States like Punjab, Maharashtra and Gujarat was, on an average, about 80 per cent higher than the average per capita income of the bottom four States viz, Bihar, Uttar Pradesh, Orissa and Madhya Pradesh. This disparity increased to 150 per cent in 1980s, indicating clearly that the developed States have been growing at a much higher rate than the poorer States.,

These widening regional disparities are attributable essentially to the fact that the per capita plan outlays for the developed States have been nearly 50 per cent higher than those for the poorer Sates, on account of the larger surpluses available for investment from own resources of these States. The transfers from the Finance Commission as well as the Planning Commission could have neutralised, if at all, only marginally the inherent disparities in internal resource generation for public investment. Further, household savings in the economy have been growing faster than tax revenues. In fact, these savings have been growing at the expense of tax revenues, to a significant extent, on account of numerous tax exemptions provided under various saving schemes. Since such savings would grow at higher rate in the States with higher per capita income, which has been growing at a faster rate, they have had the added advantage of higher rate of private investment.

The above factors, viz, the growing regional disparities in development. the preponderance of poverty in the less developed States in a mixed economy like ours, in attracting private resources even from the less developed States, have to be kept in view by Finance Commission while devising a formula for distribution of resources between States. It can no longer be maintained that the transfers from the Finance Commissions have no bearing on regional disparites in plan outlays, as the amount of surpluses left with the States on revenue account are the direct consequence of the formula devised for the distribution of revenues among the States.

As I mentioned earlier, there needs to be greater recourse to grants-in-aid to the less developed States. This, by itself, can impart progressivity to the scheme of

transfers. But since, for reasons mentioned earlier, the scope for increasing the States' share in taxes is limited, there is no alternative to making the formula for inter se distribution more progressive, if the resource position of the poorer States is to be strengthened As mentioned earlier, as much as 75 per cent of the divisible pool of revenues from income tax and union excise duties is now distributed on the basis of criteria which can be termed as 'Progressive'. Therefore, a further tinkering with these criteria where every State—rich as well as poor—gets some share under each criterion, is unlikely to impart the degree of progressivity which may be considered desirable under the present circumstances. A time has, therefore, come for giving a serious consideration to the suggestion for reserving a certain proportion of tax revenues to the States with per capita income below the national average. The Eighth Finance Commission had earmarked 5 per cent of revenues from the union excise duties exclusively for States showing deficits on revenue account. The constitutionality of a reservation can not be questioned so long as every State is getting some share from each of the shareable taxes.

Poor states at disadvantage

So far I have discussed the tasks confronting the Finance Commission, particularly those having a bearing on regional disparities in development. I am aware that economic development is a complicated process involving not merely the investable resources but also appropriate institutional framework for the release of enterprise and for the efficient use of resources. I think, so far as the poorer States are concerned, we have to work simultaneously on both the fronts, that is, restructuring of institutions to the extent possible as well as strengthening the resource position of these States. There is a positive interaction between the two Institutional reform contributes to better absorption of investment and technology. The latter in turn generate forces which contribute to restructuring of Institutions. Besides, there is plenty of evidence by now to show that, even under the existing institutional framework, the productivity or efficiency of investment is quite high in the less developed regions on accont of the abundant availability of labour and the existence of large underutilized potential in several spheres of economic activity.

The backlog of infrastructure for the less developed States is so large that Finance Commission can be expected to make only a modest contribution towards generating resources to make good this gap. Apart from the own effort of these States, the two other major sources are Plan assistance and the financial institutions. The credit-deposit ratios of most financial institutions in the less developed States are lower than the average credit-deposit for the country. It should be possible to undertake a review of this situation with a view to ensuring greater flow of institutional finance to these regions, especially for infrastructure like minor irrigation and drainage etc. But there is a limit to such a flow of resources in the absence of well-developed infrastructure like assured sources of irrigation, rural electrification, roads and markets etc, which require large resources and can be undertaken only through public investment.

This brings me to the crucial role of the Planning Commission in ensuring the development of basic physical infrastructure in the less developed States. Under the revised Gadgil Formula for Central assistance to State Plans, 20 per cent of assistance is now reserved for States whose per capita income is below the national average. However, another 10 per cent of assistance is allocated on the basis of 'tax-effort' of each State which goes in favour of the developed States and considerably neutralises the progressivity of the formula. In fact, on account of this, some of the States whose per capita income is much above the national average, get, on the whole, higher Central assistance for Plan in per capita terms than the national average.

'Tax effort' of a State can be considered to be good, if it mobilises more than what can normally be expected on the basis of its per capita income. Normally, the ratio of tax to income rises with the rise in per capita income If tax-income ratio is taken as an indicator of tax-effort, as is indeed the case under the present Gadgil Formula, then many of the developed States can be regarded as making a better tax-effort, even if they are mobilising less than what is expected of them on the basis of their per capita income Similary, the poor States are penalised on account of their low tax-income ratio, even if they are putting in a better effort than is expected on the basis of their low per capita income The criterion of 'tax effort' as used now suffers from another major defect At present no weightage is given to the size of the State under this criterion, so that two States judged as making a similar tax-effort get the same amount even if one State is several times bigger than the other I think it is high time these anomalies in the Gadgil Formula were removed

Under this formula, 60 per cent of Central assistance is now distributed among States on the basis of population For this the population figures according to 1971 census are made the basis. The Finance Commissions are also required by the terms of reference to adpot the population figures according to 1971 Census. This is in pursuance of a Statement of Policy on the Family Welfare Programme by the Ministry of Health and Family Welfare dated June 29, 1977, according to which it has been stipulated that in all cases where population is a factor as in the allocation of Central assistance to State plans, devolution of taxes and duties and grants-in-aid, the population figures of 1971 will continue to be followed till the year 2001." Apparently, the idea is to provide adequate incentive to State Governments in their efforts towards containing the growth of population by ensuring that those who achieve significant results in this regard are not penalised through smaller Central assistance and those who do not ahcieve results are not rewarded. On the face of it this is reasonable.

I do not want to go at present into the question as to whether a matter like this can fit into sub-clause (c) of clause (3) of Article 280 of the Constitution where the

President can refer any other matter to the Finance Commission "in the interests of sound Finance" However, the consensus now among the population experts and social scientists, in general, seems to be that in effecting a reduction in birth rate, factors like family's income and educational levels, particularly of women, access to primary health facilities etc.-in short the levels of social and economic development-are far more important than the direct official campaigns for population control. It is not surprising, therefore, that between 1971 and 1981, the rate of population growth among many of the poorer States was greater than among States where the level of social development is higher. It would appear from this that by adopting 1971 population, the less developed States are penalised for no fault of theirs and indeed on account of their lower level of social development resulting from their weaker resource position.

This is not to suggest that incentive schemes linked with financial allocations should not have any place in the Family Welfare Programmes. But to freeze the entire Federal transfers on the basis of 1971 population upto the year 2001 does not seem to be fair to the less developed States where the growth of population is largely beyond the control of the best of efforts that the Governments concerned can put in.

What is required

At the moment, my limited purpose is to suggest that the above reasoning has to be kept in mind while devising various other criteria for distribution where both the Finance Commission and the Planning Commission have enough discretion. For example, the minimum that can in any case be done is to see that the figures of 1971 population are used only when population is used as a separate factor in the distribution and not in respect of other factors where population has to be used only incidentally as a scale factor or as a correction factor for the size of the State.

In view of the inequitous impact of the 'tax effort' criterion as well as population criterion, I think there is a strong case for improving the Gadgil Formula by reserving another 10 per cent of Central assistance for States whose per capita income is below the national average. This assistance can be linked with outlays on basic infrastructure like development of irrigation with adequate arrangements for monitoring.

It is true that consensus in the National Development Council is difficult to achieve, especially when there is a divergence of interests among the States. This indeed explains why a patently wrong criterion in the formula for the distribution of resources can persist for decades because of lack of consensus on changing it. The Finance Commission, on the other hand, is uniquely placed in this respect as a compact expert body of eminence, commanding respect and confidence of States and, if I may say so, without any obligation to explain things once the work of the Commission is over! This probably explains why the Finance Commission transfers could not become more progressive in the recent period. Even so, I think, the Planning Commission as an expert body should take initiative for pointing out the drawbacks in the Formula and for starting a meaningful debate on alternative criteria for allocation of resources in the interests of balanced regional development.

The lack of concern for equity is particularly evident in the case of financial transfers under the various Centrally Sponsored Schemes. A Committee appointed by the National Development Council at the time of the formulation of the Seventh Five Year Plan came to the conclusion that the total amount transferred to States under the various Centrally Sponsored Schemes was almost equal to the amount transferred under the Gadgil Formula, and that the distribution of such resources was regressive as between different States, in that, the richer States were able to avail of larger assistance per capita on account of their ability to provide matching grants. Thus the total Central assistance for plans, i.e., the combined amount transferred through Gadgil Formula and Centrally Sponsored Schemes ceases to be progressive. It should be possible for the Planning Commission to undertake a review of this situation with a view to exploring the possibilities of making the transfers more liberal to the poorer States which can not afford to provide the matching grants stipulated at present.

To my mind, the central question in the Centre-State financial relations at this stage is, how to redress the regional imbalances in the availability of resources. In the course of the last 40 years, we have achieved a high degree of economic integration in the country in the sense that the output produced in any part of the country can be moved for sale in any other part of the country and factors of production like labour and capital are also highly mobile, but economic integration in the true sense is possible only if the regional imbalances in the availability of basic infrastructure are redresed through long-term investments, and the long-run comparative advantages enjoyed by the less developed States are fully exploited in the overall national interest.

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Technically qualified manpower to be 3.8 million by 1990

The total stock of scientific and technical personnel is expected to be around 3.8 million at the beginning of 1990. It was estimated as 3.1 million at the beginning of 1985. No comparable data is, however, available regarding the stock of science and technology personnel for various countries as there is no uniformity in the categories included by them in the stock of S&T personnel.

The National Research Development Corporation received enquiries for technical know-how in various areas from 21 countries in the last three years. These are: Angola, Australia, Bangladesh, Bolivia, Guyana, Indonesia, Ivory Coast, Kenya, Malaysia, Mauritius, Nigeria, Philippines, Senegal, Syria, Tanzania, Tobago, Togo, Trinidad, UAE, USA and Zambia.

Banking industry- the 1987 scenario

D.G. Gupte

Analysing the trend and progress of banking industry through 1987, the author enumerates its success in the spheres of deposits, credits, interest rates, branch expansion, etc. Success has indeed been commendable, but the industry has yet a long way to go, says the author. Concerted efforts are called for if the industry is to rise to the expanding business in diverse fields and the social responsibilities expected of it.

THE BANKING SCENE IN 1987 was characterised by continued expansion both in deposits and in credit, although the growth rates in both were lower during the year than in the previous year. Indications are that almost all the nationalised scheduled commercial banks will be able to declare higher profits for 1987 than those shown for the previous year. The spectrum of banking activities continued, to expand during the year, with larger interface with capital markets.

Deposits expansion

During 1987, aggregate bank deposits have shown a net expansion of 16,793 crore rupees against the net expansion of 17,315 crore rupees in 1986. The growth rate in 1987 was however, lower at 16.4 per cent against 20.3 per cent in 1986. Total bank credit showed a net expansion of 6, 031 crore rupees during 1987 against the net expansion of 7, 842 crore rupees in 1986. Here also, the growth rate was lower at 9.6 per cent in 1987, against 14.3 per cent recorded in 1986.

Food credit has declined sharply by 2,527 crore rupees in 1987 against the decline of 761 crore rupees in 1986. Non-food credit has shown a net expansion of 8,558 crore rupees or 14.9 per cent, against the net expansion of 8,603 crore rupees or 17.7 per cent in 1986.

Commercial Banks, no doubt, benefitted from the implementation of a co-ordinated, across-the board, reduction in interest rates on various savings instruments made by the Government of India and the Reserve Bank of India in April 1987. Despite this, banks have to compete with other savings instruments for mobilisation of funds.

As is known, the deposits rate of bank for the longest maturity was reduced from first of April, 1987, to maintain the margin between borrowing and lending rates of banks. The maximum deposit rate was reduced from 11 per cent to 10 per cent, and this was made applicable to deposits with a maturity of two year and above. The shortening of the maturity structure, with the maximum deposit rates being paid on two year deposits, was made to enable easier adjustments of bank interest rate in response to changing economic circumstances. In respect of deposits of one year and above but less than two years, the rate of interest was raised from 8.5 per cent to 9 per cent, and the rates in respect of other maturities were kept unchanged. At the same time all lending rates of bank above 15 per cent were reduced by one percentage point from first April, 1987. This was done mainly with a view to lowering the cost of credit to the borrowers.

Interest rates on other savings instruments such as Deposits, Debentures of both Public and Private sector companies, public sector bonds and other schemes were also reduced. Such conscious policy measures seem to have been taken with a view to avoiding unhealthy competition among various avenues of savings.

Despite the deceleration in the rate of growth of deposits,bank deposits as percentage of total savings in the financial assets by the household sector has risen from around 68 per cent in 1986 to over 69 per cent 1987. The ratio of deposits to net national product at current prices has also risen over the past five years to around 48 per cent.

Decline in food credit

The sharp decline in food credit during 1987 was due to the return flow of funds from the Food Corporation of India to the banking system, following the soft loan made available by the government of India to the Food Corporation of India. Thus, the relative share of food credit in total credit of scheduled commercial banks has declined over the past two years.

Branch expansion

In the area of branch expansion by commercial banks, the emphasis during the year was on consolidation. The number of new branches opened was lower in 1986-87 than in the previous year. Steps were also taken during the year towards rationalisation of the branch network and operations of public sector banks abroad.

In the new branch licensing policy, special emphasis was laid on consolidation, while at the same time, ensuring that there was availability of bank branch within a distance of 10 kilo metres in the rural and semi-urban areas, and a coverage of 17,000 population per bank office in rural and semi-urban areas of each block. More liberalised norms for branch expansion in hilly and tribal areas were adopted by the Reserve Bank of India.

During the period July 1986 to March, 1987, 300 new branches of banks were added, of which four-fifths were in unbanked centres. Branch office in the rural areas formed nearly 56 per cent of the total number of bank branches at the end of March 1987, as compared to only 22 per cent in June, 1969. This would indicate the efforts made by commercial banks in general and public sector banks in particular, in expanding bank activities in the various parts of the country, and particularly in rural and semi-urban areas, which did not have enough banking facilities before the nationalisation of 14 commercial banks in July, 1969.

With a view to improving the functional efficiency of rural branches, the Reserve Bank of India advised banks to observe one day a week as Non-Public business working day at the rural branches so that the managers could spend the day exclusively in the field to contact the present and prospective clientele for developmental and promotional work, for mobilisation of deposits, credit allocation, supervision over the end use of credit, recovery of loans and rendering appropriate guidance to borrowers. Commercial banks were also told to set up satellite or mobile branches in areas where the volume of business and other conditions did not warrant setting up of a regular branch.

After the difficulties faced by Indian banks operating in the U.K. a few years ago, the Reserve Bank of India has taken steps towards rationalisation of the branch network and operations of public sector banks abroad.

Despite the volatile atmosphere in the foreign exchange markets in the last quarter of 1987, Indian banks having large foreign exchange business have been able to do reasonably well in respect of their foreign exchange business. Their profits from foreign exchange operation-since 1987 are expected to be higher than in 1986, it may be recalled that a few banks had to suffer in their foreign operations, and were obliged to make provisions for such losses in 1985 and 1986

Other developments

In the monetary sphere, besides the downward adjustment in the interest rates structure, raising of reserve ratio of commercial banks and the rationalisation of selective credit controls were the important developments. In view of the large increase in the volume of reserve money and overall liquidity during the previous three years, the Reserve Bank of India decided to pursue a cautious credit policy to avoid a resurgence of inflationary pressures. In this context, the cash reserve ratio of scheduled commercial banks was raised from 9 per cent to 9.5 per cent effective from 28th of February last year and further to 10 per cent from 24th October last. The statutory liquidity ratio has been raised from 37.5 per cent to 38 per cent of the net demand and time liabilities of scheduled commercial banks from 2nd of this month.

The Reserve Bank of India imposed penalty for daily shortfalls in the maintenance of statutory liquidity ratio by banks. According to the report on the trend and progress of banking in India for the year ended June 1987 published by the Reserve Bank of India recently, as a result of the measures taken by it, there has been a marked improvement in the maintenance of statutory liquidity ratio on a daily basis by commercial banks.

With a view to developing bill finance as payments mechanism, the Reserve Bank of India initiated certain steps. The effective interest rate bill rediscounting on behalf of borrowers in the highest interest range was reduced. The ceiling on the discounting rate was raised from 11.5 per cent to 12.5 per cent. Besides, the credit authorisation scheme was liberalised substantially. This is expected to lead to a reduction in the number of bank borrowers coming under prior authorisation and vesting of larger discretionary powers with banks.

The Reserve Bank of India has called on commercial Banks, and rightly so, to pay increasing attention to improve the quality of their loan assets and timely recovery of dues. In its recent report on trend and progress of banking, it points out that this is essential if the banks are to sustain their profitability at reasonable level in the coming year.

Since the composition of banking business is undergoing changes with banks undertaking new activities, it is essential for them to eschew speculative business and to ensure that their major functions of providing working capital to agriculture, industry and exports are effectively perfomed.

Problems

As it is, banks have been facing strains arising from inadequate recovery of dues and industrial sickness. In the sphere of industrial financing, total assistance

sanctioned by the All India Financial institutions as also commercial banks was higher in 1986-87 than in the previous year. At the same time, sickness in industry is increasing, which has been worrying the managements of commercial banks.

It is worth noting that of the total number of sick units there were 689 large sick industrial units enjoying credit limit of one crore rupees and above and the aggregate outstanding bank credit to these units amounted to 3,239 crore rupees. Of this, 374 units were considered by banks as viable, and 230 units were put under nursing programme by the banks.

In the sphere of cooperative banking, the National Bank for Agriculture and Rural Development, NABARD, took a major policy initiative during 1986-87 in providing refinance facility to the state and district level credit institutions for non-farm activities The level of refinance for non-farm activities was stepped from 90 per cent of bank loans to 100 per cent. A separate line of credit was sanctioned by NABARD for providing refinance for the National Oilseeds Develop ment Programme. A ten point action progremme wa initiated during the year of rehabiliation of weak lan development banks.

Conclusioı

When one takes a look at the trend and progress o banking in India during 1987, one observes that whil banks have been able to achieve commendable success in many spheres, they have yet a long way to go. The will have to make concerted efforts to improve thei service to the customer and continue with thei mechanisation and computerisation programme i order to handle the expanding business in divers fields. In this respect, not only the top managements i banks but also the employees at all levels will have t ensure that they come up to the expectations of not onl their own customers but the community as whole. I Inida, commercial banks have been asked to undertak social responsibilities and are expected to play a important role in the country's economic development

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JALDHARA, a scheme to provide pump sets to marginal farmers in drought prone areas on nominal rental or lease charges. There is also the proposal to initiate a project for digging one million wells under Rural Landless Employment Programme

Much of the problems faced by successive budgets in regard to mounting non-Plan expenditure and budgetary deficits can be taken care of if the economy is revived and the growth rate in the coming years is stepped up. This is sought to be done through schemes to revive agriculture and industry. However agriculture is still too dependent on monsoons and the budgetary allocation of Rs. 227 crore for water resources is hardly adequate to spread irrigation to areas which are at present rain-fed. A lasting solution to the problem would probably have to await the Eighth Plan.

Monsoons, the saviour

Briefing newsmen on the budget, the Finance Secretary, Shri S. Venkitaramanan, said that price rise in the current year was due to inadequacy on the supply side in view of the failure of the monsoons. The budgetary deficit and other factors did not have much impact on the price situation. He felt that in case the monsoon was good, which was quite likely the prices are not likely to go up much. The economy, he said, could sustain the order of deficit envisaged for the coming year. One would, thus, have to wait till the monsoons arrive and watch how effectively the schemes announced by the Prime Minister for the revival of agriculture and industry are implemented to determine the success of the Budget. ☐☐☐

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pumpsets and to extend light connections to rura families below the poverty line and extension o insurance and social security benefits to poor families i rural areas. A national level corporation would develo schemes for employment generation for schedule castes and tribes, As part of reducing input costs fo farmers, the budget also provides for exemption fron excise duty for electric motors used in pumpsets an pesticide intermediates and other incentives fo processing of agricultural produce. Among industries textiles and electronics receive special attention.

Warning to manufacturer

The Finance Minister has expressed the hope tha the entire relief available to manufacturers would b passed on to consumers in the form of lower prices Since past experience has not been encouraging in thi regard, Shri Tiwari has thought it fit to warn that th concessions would be withdrawn if there is evidence o manufacturer taking undue advantage of the concessions The Budget, while being helpful to large sections o people, would also aggravate concerns about th Government's ability to control inflation and brin about some fiscal discipine.*(Courtesy . PIB, New Del*

Additional 175 T.V. Transmitters i Seventh Pla

The number of TV transmitters in the country wi increase to 392 from the present 217 with th implementation of Seventh Plan Schemes. In a writte reply the Minister of State for Information an Broadcasting, informed the Lok Sabha o November 16, 1987 that the gross revenue o Doordarhshan from commercial advertisements an sponsored programmes during 1986-87 was Rs. 9 crore. Part of the revenue was spent on furthe development of Doordarshan network. ☐ ☐ ☐

An insight into poverty alleviation programmes

V.S. Singh

The author makes an objective assessment of various poverty alleviation programmes in operation. He focusses his study on three more important programmes–NREP, IRDP and RLEGP and suggests labour-intensive works catering to the needs of local people, like construction of village link roads, afforestation, soil conservation etc. as a remedy for the prevailing bottlenecks coming in the way of successful operation of the rural employment programmes. While pinpointing the main lacunae in IRDP, brought to light by various national level organisations, he emphasizes the need for reorientation in the operation of the programme and change in the attitude of bank personnel in the matter of advancing funds to solve the problem.

Ever since the beginning of the planning era, the removal of poverty and raising the level of living of the masses, has been, in one form or other, one of the main objectives of the nation's successive Five Year Plans. It was, however, in the Fifth Plan (1978-83), when the word 'Poverty' was for the first time specifically introduced and 'Removal of poverty and attainment of economic self reliance' was enunciated as one of the two basic objectives of the Plan. In fact, in a developing economy, and more so in a Welfare State like ours, poverty removal programmes must be the hub of the Plan objectives. In the present Paper an attempt has been made to give a critical analysis of the functioning of the poverty alleviation programmes that are currently under operation and lacunae that are eating out the very roots of the programmes.

In consonance with the Plan objective of raising the level of living of the poor and pulling them up from the morass of poverty, a number of development programmes are in operation which, by and large, mainly aim at providing employment to the persons living below the poverty line, since it is considered that through providing employment to this cross section of the population, a source of income would be generated for them and would, thus, enable them to rise up from the existing subsistence living. Among these poverty alleviation programmes, the Integrated Rural Development Programme (IRDP), National Rural Employment Programme (NREP) and Rural Landless Employment Gurarantee Programme (RLEGP) deserve special mention. Though much echo has been made about the benefits accruing from these programmes but, as the things obtain today, these programmes are yet to make a real dent on the objective with which these were launched. In the succeeding paragraphs a critical assessment of the present working of these programmes along with specific suggestions as to what ought to be done, so that these programmes are able to achieve the objectives, both in letter and spirit, for which they were launched.

National rural employment programme

The National Rural Employment Programme was launched in December, 1980 in place of the erstwhile programme of "Food For Work". This Programme had also the same objectives as that of the 'Food For Work Programme'. The basic objective of this programme was to create gainful employment opportunities for unemployed and under-employed persons of the rural areas. It also aimed at strengthening the infrastructural facilities in rural areas, through construction of puplic utility assets. It, thus, emerges from the very objective of the programme that two conditions are necessary to be fulfilled before initiating this programme. Firstly, the proposed schemes must create permanent assets and secondly, the expenditure against labour and material component of the schemes included in the programme should have a ratio of 60:40 respectively.

Constraints

The Evaluation Division of the State Planning Institute, U.P. had conducted an Evaluation Study of this programme in the year 1983 and had, accordingly, brought out a Study Report in this connection. The report brings to surface some of the constraints and the main bottlenecks coming in the way of successful operation of the programme. It has been observed in the Evaluation Report that the specific conditions mandatory for launching the programme viz. construction of permanent assets, 60:40 ratio in labour and material components, at least 10% expendi-ture on

the works specifically benefiting the weaker sections, at least 10% expenditure on afforestation etc. have practically made the selection of the appropriate construction works a very difficult task. Some of the conditions are mutually contradictory like construction of permanent capital assets tagged with the condition of 60:40 ratio in expenditure against labour and material respectively. All concerned were of the opinion that it is rather impossible to construct permanent capital assets by maintaining a ratio of 60:40 in labour and material.

The rate of wages to labourers is another major factor adversly affecting this programme. It is difficult to arrange and maintain the required number of labourers with the existing wages. The wages, fixed for labourers working in this scheme, are less than that of the corresponding wages in some Departments. In all districts the wage rates were lower than the fixed one, with the result that only those labourers are willing to work under this scheme, who are unable to find employment anywhere else. The workers engaged in this scheme are, by and large, women and feeble males, whose productivity is generally lower than that of an average worker.

Remedial steps

There is an imperative need for determining the priorities among the programmes eligible for inclusion in this scheme. The priorities should be decided taking into consideration the felt needs of the area and potentials of employment. Only those works should be taken up which are labour intensive and are actually desired by the local people. Village link roads, soil conservation, construction of tanks, afforestation programmes should be accorded priority. as these programmes are based on the felt needs of the local people and are also labour intensive.

What ails IRDP

Since 1970 a number of rural development programmes have been in operation with a view to alleviating poverty by increasing income and employment. Of these programmes, Integrated Rural Development Programme, which accounts for nearly 40.2 per cent (Rs. 3473.99 crores) out of the total Seventh Plan Rural Development investment of Rs. 8448.83 crores, is the biggest one. The Seventh Plan not only increased the allocation to Rs. 3474 crores from Rs. 1661 crores in the Sixth Plan, but also defined the poorest of the poor as those having an annual income of Rs. 4800, which is substantially lower than the cut off income of Rs. 6400 but higher than the Sixth Plan definition of Rs. 3500 per family. The Seventh Plan recommends that cost effectiveness and minimisation of leakage should be the two guiding principles in the implementation of poverty alleviation programmes. These programmes should be formulated and implemented in a decentralised manner with the participation of the people at the grassroot level through village panchayats.

A number of institutions such as Reserve Bank of India, Programme Evaluation Organisation (PEO), NABARD, State Bank of India etc. have studied the IRDP programme. Taking these into account G.V.K. Rao Committee has made certain recommendations with far reaching consequences.

Observation of G.V.K. Rao Committee

G.V.K. Rao Committee has rightly recommended that the local initiative must be encouraged by involving the people effectively in drawing up programmes of rural development. The Committee recommended that the Panchayat Raj bodies have to be activised. It rightly pointed out that Block Development Officer had become ineffective and the credibility of the Organisation had been eroded. The Observation made by the Committee about B.D.Os. was in line with recommendation made by the Programme Evaluation Study. The Committee has also observed that the Cooperatives have not kept pace with the ever increasing credit requirements of agriculture and rural development. The entry of commercial banks into the field of credit has in no way proved better. In fact, commercial banks are much more security conscious than cooperatives.

Taking into account empirical studies done by national level organisations, the G.V.K. Rao Committee has made two important observations. Firstly, the planning component of individual programmes is found to be weak, Secondly, IRDP kind of asset based programmes have a trend towards corruption. While agreeing with these two findings, it would be difficult to fully agree with the suggestion of the Committee that the subsidy given to IRDP beneficiaries should be removed and instead, the beneficiaries should be given easy terms of credit at low interest rates No doubt the subsidy element has given rise to corruption. All the same complete withdrawal of subsidy will not solve the problem. As regards subsidy, it has been pointed out by the PEO that in some areas the subsidy was not adjusted immediately after providing assets to beneficiaries with the result that the beneficiaries had to pay interest even on the subsidy portion of the cost of assets. What is important is that subsidies are given on a selective basis and administrative efficiency, so that there is no misuse of subsidy.

What PEO study says

Even the Commercial banks have not been found useful. According to PEO Study, in a large number of cases loan applications were rejected on flimsy grounds. The rejection rate in Sangrur district of Punjab was 70 percent. Due to these reasons and their being security conscious, it would be difficult for the Commercial banks to participate in a big way in giving agricultural credit. The IRD Programme was initiated in a large number of districts without the necessary preparatory work. According to the PEO Study, nearly 70 percent of the selected districts reported inadequacy of administrative and banking infrastructure and supporting services to provide assets to beneficiaries.

Excepting in Karnataka, where identification of beneficiaries was done after conducting a detailed house to house survey, in most of the States,beneficiaries

were selected from master list of Small Farmers Development Agencies (SFDAs) and Marginal Farmers and Agricultural Labours Development Agencies (MFALS). According to the PEO Study, many of the States had not introduced Vikas Patrika to be given to each beneficiary for monitoring of the impact of the IRDP Scheme.

The Programme Evaluation Organisation of the Planning Commission had done an evaluation of the working of IRD Programme in May 1985. In all, 16 States were surveyed. According to the PEO Study, about 90 per cent of sampled households expressed the view that as a result of the IRDP their income and family employment had improved and 77 per cent of selected households reported that their consumption level had increased. This Study also showed that nearly 49.4 percent of the selected sample households were able to cross the poverty line. All the beneficiaries in the annual income bracket of Rs. 2500 to Rs. 3500 were able to cross the poverty line i.e. came up to an income level of Rs. 3500 and above. The majority of the households in the lowest income group were not able to cross the poverty line, partly due to inadequate assistance and partly, because of other factors, such as inadequacy of supporting facilities and lack of sufficient coverage of activities having better potential for income generation. About 22 per cent of the households felt that the scale of financial assistance available under the scheme was inadquate. Nearly 26 per cent of the families were not properly identified, as they belonged to the family having annual income exceeding Rs. 3500. The increase in employment was the highest in tertiary sector, followed by primary and secondary sectors respectively. The Study suggested that the income limits of Rs. 3500 also needs to be raised in view of general price rise

Concurrent evaluation

About the extent of benefits from the IRD Programme, there are differences between the findings of the PEO and the concurrent evaluation, carried out by 9 Research Institutions, on behalf of the Ministry of Rural Development. While PEO Study shows that in agriculturally prosperous areas, 60 per cent of the respondents considered that the quantum of admissible financial assistance was inadequate to enable the target families to cross the poverty line. the concurrent evaluation shows that in case of 79 per cent of beneficiaries, the assistance was sufficient to acquire the assets under the scheme. The concurrent evaluation reveals another interesting information that almost invariably the value of assets assessed by the beneficiary was lower than as per record.

The other important findings of the concurrent evaluation are :

1. The poorest of the poor had predominant coverage under IRDP. About 60% of the assisted families belonged to the destitute group, with an annual income up to Rs. 2265 and 37% to very poor group, where the income ranged between Rs. 2266 and Rs. 3500.
2. About 40% of the beneficiaries were selected in the meetings of Gram Sabhas and about 56% beneficiaries by officials.
3. The assets had generated incremental income of more than Rs. 2000 in about 26% cases. It ranged between Rs. 1001 and Rs. 2000 in 22% cases and between Rs. 501 and Rs. 1000 in 12% cases. It was upto Rs. 500 in about 12% cases.
4. In about 20% cases, the assets of the beneficiaries had not been insured.
5. In about 20% cases, no incremental income was generated by the assets. This is a matter of serious concern.
6. Training for handling the assets was required by about one fifth of the beneficiaries, but it was not given.
7. After care and support by government agencies was not made available to the beneficiaries in about 45% cases.

Various studies

The Agricultural Banking Department of State Bank of India has conducted studies relating to evaluation of IRDP in a number of blocks in Uttar Pradesh. Following are the important findings of these studies :

1. Proper identification of beneficiaries is not being done and they are not adequately helped in selection of the schemes.
2. There is a lack of infrastructural facilities like roads, market, veterinary hospitals, milk collection centres etc. for the success of the schemes.
3. Technical guidance to the beneficiaries is not forthcoming properly, so as to use their assets economically.
4. There is a lack of coordination among the bank and block officials.
5. Insurance claims of animals are not being settled expeditiously.
6. Under-financing of the projects gives rise to poor return and renders the scheme unviable.

Pioneering study in the field of IRDP was conducted by the NABARD. The NABARD study shows that the extent of leakage was 26 per cent and the animals selected under the animal husbandry programme were of poor quality. In all States income generation was decidedly better for minor irrigation scheme. The average incremental income that accrued as a result of participation in IRDP worked out to Rs. 1616.

All the evaluation studies and the report of the G.V.K. Rao Committee came to the same conclusion that all was not well with the IRD Programme. The beneficiary-oriented approach of the IRDP has not served the purpose for which it was started, as the benefits in a large number of cases were going to the wrong type of households for whom the programme was not meant. There is, therefore, an imperative need for drastic reorientation in the operation of the programme and the pilferages have to be completely checked by adopting remedial measures. The outlook of bank personnel associated with the advance of funds needs to

be substantially changed from the existing rigid one to accommodating and helping one.

Rural landless employment guarantee programme

This programme is the latest one in the series for alleviation of poverty in the rural areas. The programme was introduced from 15th August, 1983, with the objective of (a) improving and expanding employment opportunities for the rural landless, with a view to providing guarantee of employment to atleast one member of every landless household upto 100 days in a year and (b) creating durable assets for strengthening the infrastructure, so as to meet the growing requirements of the rural economy. Thus, the Rural Landless Employment Gurantee Programme (RLEGP) has been started with the dual objective of expanding employment opportunities in rural areas and providing sharper focus on the landless labour households, which constitute the hard core of the people below the poverty line. As in the case of NREP, wage and material cost ratio will be 50·50 It is important to pinpoint that in the series of programmes launched with a view to considerably reducing the incidence of poverty, RLEGP is the first programme, which provides a guarantee for employment to the rural landless labourers. The wages to the labourers engaged in the works under this programme are to be given in cash as well as in kind i.e. in the shape of wheat, An outlay of Rs. 1743.78 crores for the country during the Seventh Plan has been provided for RLEGP to be borne entirely by the Centre. Based on the average wage of Rs. 8.61 per day as in 1984-85 and a wage material cost ratio of 50·50, a total employment of 1013 million mandays is likly to be generated during the Seventh Plan, at an average rate of around 200 million mandays per annum.

What is required

There are a number of lacunae in the programme content as well as in the operational aspects, which are putting a great hurdle in achieving the objective for which the programme was initiated. Some of the important lacunae in the programme are briefly enumerated below :

(1) There is no systematic selection of villages for field operation of the programme. Besides, no survey has been done to identify the unemployed. It is suggested that only those villages should be selected for this programme, which are predominantly inhabited by scheduled castes and landless labourers as these, by and large, form the bulk of the unemployed in the rural areas. Before launching the programme in an area, it is imperative, first of all, to identify the unemployed persons. This is necessiated because of the fact that experience of implementation of this programme in the past has revealed that the required number of persons were not available to work on the projects, as no prior survey was done to assess the magnitude of the unemployed in the areas. Remedial measures are needed to plug these loopholes.

(2) It was specifically laid down in the objective of the scheme that it would guarantee employment to at least one member of every landless household up to 100 days, but as the things obtain today, no record is being maintained to ensure that the beneficiary got employment of 100 days in a year. It is, therefore, necessary that cards may be issued to each beneficiary and entries of number of days worked may be mentioned in the card, so that it may be assessed as to how many days in the year the beneficiary got employment through this scheme.

(3) The intensive field visits have revealed that employment through this scheme is, by and large, provided in the peak agricultural seasons, whereas, the objective of the scheme was to provide employment during slack agricultural season. The main reason for intensifying the works on the projects in such peak seasons is the utilisation of funds allotted at the fag end of the financial year i.e. in the month of March. What is, therefore, needed is early sanction of the project, so that work may be started well in time.

(4) One of the main difficulties that the beneficiaries working under this scheme face, is with respect to the string of payment of 4 kg. wheat per day because these poor people, who have subsistence living and entirely depend on what they earn daily, get much disappointed and disgusted when after doing hard manual labour throughout the day and, there after, travelling on foot a number of kilometres they go to the grainshop for obtaining wheat as daily wages and find the shop closed. Moreover, the storage problem of the grains received as wages further aggravated the situation. In addition, the labourers in the Eastern U.P., who are predominantly rice eating people, naturaly prefer to have cash as wages instead of wheat, as rice is not distributed as wages. What is, therfore, needed, is that no string of foodgrains is attached in the payment of wages.

(5) The wages paid to the workers engaged in the projects under this scheme is Rs. 11.50 per day, which is lower than the prevailing wage rate and is much lesser than rate in the Western Region, where the general wage rate is Rs. 15.00 per day. For the successful working of the project and to attract the required number of labourers, it is essential that wage rate, in no case, is lesser than the existing wage rate in the area. It is, therefore, recommended that wage rate for RLEGP works should, in no case be lower than the rate prevailing in the area, for similar works.

(6) A special feature of the RLEGP was the abolition of intermediaries i.e. the contractors in such employment oriented projects, but in actual practice the contractors are invariably engaged by the implementing agencies and, thus, one of the main ingredients of the programme is not being adhered to. Strict vigilance is, therefore, required to see that contract system does not crop up at all in the execution of the projects of this scheme.

(7) The introduction of contract system in the execution of the programme has resulted in incorporating

fictitious figures of mandays in the records of the projects relating to RLEGP, as this is the easiest recourse that contractors adopt for procuring the premium.

(8) One of the main objective of the RLEGP was the creation of durable assets, besides providing employment. The ratio between labour and material is fixed at 50:50. Since the executing machinery has to adhere to this specific ratio, the final stages of the construction works generally remain incomplete. For example, in case of construction of roads, the soling stage, which follows the earth works, is not completed on the entire length of the work and only a portion of the project gets completed in all respects. There is, thus, an imperative need that the existing ratio between labour and material is suitably revised.

(9) There is absolutely no provision, whatsoever, for the maintenance of the projects, constructed under this programme. The obvious result is that whatever is constructed gets completely eroded to the original position, indicating as if no work was at all ever started on the site. It is, therefore, urgently needed that a specific outlay is allotted for maintenance works of these projects.

Concluding remarks

It, thus, emerges from the foregoing critical analysis that there is an impelling and urgent need for drastic reorientation in the existing content of the poverty alleviation programmes and the implementing procedure and its machinery. The lacunae in the identification of the really poor ones and in the deveopment programmes that are in operation for alleviating poverty have necessarily to be wiped off. These programmes have to be operated on a war footing and in such a fashion, so that benefits of these go only and only to the poorest of the poor. What is urgently needed is to bring a real dent in the income of the most unpriviledged cross section of the society, which is living in utterly abject poverty, because those living just below the poverty line would, in all likelihood, be able to cross it in due course of time, as a result of multiplier effect of various development programmes, meant to raise the income of the poor.

In order to change the existing scenario of abysmal poverty of rural masses and give them a ray of hope, the strategy, content, procedure, conditions, implementation machinery sets of the poverty alleviation programmes will have to be restructured in such a fashion as suggested in the Paper, otherwise the parrot-like slogan, of planners and policy makers, of pulling up the rural masses from the quagmire of poverty and raising the level of thier living, enshrined in the main objectives of the successive Five Year Plans, would ever remain a myth and nothing short of it. □ □ □

Measures to prevent atrocities on weaker sections

With a view to preventing atrocities on Scheduled Castes and Tribes Dr. Rajendra Kumari Bajpai, State Minister for Welfare has written to the Home Minister to ensure suitable representation to these classes in recruitment to the police and also to arrange re-orientation courses for the police personnel to enable them to take sympathetic attitude towards the Scheduled Castes (SCs) and Scheduled Tribes (STs.)

Presiding over the meeting of the Parliamentary Consultative Committee of her Ministry recenthy she said that her Ministry had also written to the Chief Secretaries on the subject and additionally assured the members, who complained of atrocities on the weaker classes, that her Ministry would continue to remind the States and Union Territory (UT) governments on the necessity of taking expeditious suitable remedial measures.

Talking of the economic welfare of these classes she informed the members that under the Government of India's different schemes for the alleviation of poverty, it had been decided to allocate 30 per cent of the budget available to the District Committees on the Implementation of the 20 Point Programme to be allocated to the welfare of the SCs and STs. She also said that Khadi and Village Industries Commission had decided to allocate 30 percent of the funds under different schemes for the benefit of these classes in the form of subsidy or loans. □ □ □

Rs. 292 crore for Ganga action plan

194 schemes for purification of Ganga river had been sanctioned at an estimated cost of Rs 200.61 crores upto January 31, 1988. Work was in progress in 25 out of 27 towns, and 11 schemes at an expenditure of Rs. 4.17 crores had been completed, the Minister said.

About the progress of the purification of Ganga river, a works programme of Rs. 292.31 crores for U.P., Bihar and West Bengal had been approved by the Central Ganga Authority under the Ganga Action Plan.

The outlay during the Seventh Five Year Plan period was Rs. 240.00 crore. An amount of Rs. 54,76 crore had been made available to the implementing agencies upto 31st January, 1988. □ □ □

NABARD in the aid of rural poor

Krishan Anand

This article throws light on the manifold role of NABARD, an apex body for providing refinance facilities in rural areas. It was set up on the recommendation of Sivaraman Committee in 1982, to provide credit for the promotion of agricultural small scale industries, cottage and village industries, handicrafts and handlooms and other related economic activities aimed at benefiting the rural poor. In the wake of severe drought last year, the role of NABARD has become all the more significant. Here, the author tells what NABARD is doing to help handloom weavers and handicraft artisans and what steps it has taken to provide the facility of agricultural credit to the rural poor.

AGRICULTURE IS THE KEY TO INDIA'S ECONOMY. It accounts for 50 per cent of the total employment, 35 per cent of the Gross Domestic Product and 33 per cent of the country's exports. According to the 1981 census, 24 crore people are employed in the agricultural sector. Out of these, 37.8 per cent are cultivators, 22.7 per cent agricultural labourers and 39.5 per cent other workers.

The Government has been following a multi-pronged strategy for improving the lot of the rural people and bringing them above the poverty line. The major thrust of the 20 point programme is also to help the rural people, especially those below the poverty line and in the unorganised sector.

The farmers are being provided timely and needed inputs like water, seeds and fertilisers, at cheaper rates. Several land reform measures have been taken up along with research and development studies. Besides the Government is providing the farmers a crop insurance cover and cheap finance so as to increase the purchasing power of the rural people under its various poverty alleviation programmes.

NABARD, apex refinancing agency

To make available cheaper finance to the farmers, the National Bank for Agriculture and Rural Development, popularly known as NABARD was set up by the Government in 1982 under an Act of Parliament NABARD is the apex body for providing refinance facilities in rural areas. It took over the functions of the erstwhile agriculture credit department and rural planning and credit cell of the Reserve Bank of India as well as of the Agricultural Refinance and Development Corporation. Its subscribed and paid up capital is Rs. 100 crore contributed by the Central Government and the Reserve Bank in equal proportions.

NABARD was set up on the recommendation of Sivaraman Committee for providing credit for the promotion of agricultural small scale industries, cottage and village industries, handicrafts and handlooms and other related economic activities aimed at benefiting the rural poor. NABARD serves as an apex refinancing agency for the institutions providing investment credit for the promotion of various development activities. It takes measures towards institutions' building so as to improve the capacity of the credit delivery system. It also coordinates the rural financing activities of all institutions engaged in development activities in rural areas.

The NABARD refinance is available to State Land Development Banks, State Cooperative Banks, Scheduled Commercial Banks and Regional Rural Banks.

Touching new heights

The Centrally sponsored programme for extending assistance to small and marginal farmers for increasing agricultural production was taken up in 1983-84. According to the latest available official figures term-credit disbursement by way of replacement refinance under schematic lendings reached a new peak of Rs. 1, 192 crore during 1985-86. It registered a 12 per cent increase over the previous year. Refinance provided for the implementation of the Integrated Rural Development Programme also reached a new peak of Rs. 378 crore, registering an increase of 6.2 per cent over the previous year. In 1986, NABARD started a credit project with a $375 million World Bank assistance for meeting the growing investment credit needs of the agriculture sector. For diversification of the rural economy and expansion of the non-agricultural activities, refinance support was also extended to the working capital finance, long-term investments and financing of infrastructural activities in rural areas.

Manifold role of NABARD

The role of NABARD and similar institutions has increased manifold in view of this year's severe drought. The Planning Commission has also expressed concern in its annual plan document for 1987-88, which was presented to Parliament recently, that "There was a considerable shortfall in the disbursement of cooperative loans in 1986-87, particularly in respect of short-term loans, on account of severe drought conditions in several states which slowed down the recovery of cooperative loans and led to mounting overdues". This according to the document, had resulted in reduced eligibility for refinance facilities from NABARD.

Recently, NABARD launched a three-year project for the development of Premier Agricultural Credit Societies (P.A.C.S.) and Large Scale Multi-purpose Societies in tribal areas, popularly called LAMPS. The project is aimed at giving a new dimension to developing the cooperative societies. It will be operative initially in 20 districts and benefit 600 PACS and all the working LAMPS. Under this scheme, NABARD has prepared a 15-point programme for the development of societies so as to strengthen their operational efficiency. The programme will help the farmers, scheduled castes and scheduled tribes in respect of collection of minor forest and other agricultural produce.

Recently, the Government has announced a number of relief measures for helping the handloom weavers and handicraft artisans whose purchasing power has been affected by the drought and floods in different parts of the country.

To meet the situation, NABARD has decided to provide additional credit to the State Handloom Development Corporations and Weavers Cooperative Societies. It has also increased its credit limit from 40 per cent to 75 per cent of the anticipated sale of primary and apex Weavers Cooperative Societies.

NABARD has also undertaken a number of studies on various aspects of agricultural credit. The findings of these studies, expected to be available in 1988, will hopefully make suggestions for an all-round improvement in the credit delivery system. □ □ □

Marine products exports to cross Rs. 470 crores

Exports of marine products from India are expected to cross the annual target of Rs. 470 crore during the current financial year (1987-88) according to the latest trends available upto December, 1987 During the period April-December, 1987, exports of marine items, comprising mainly of shrimps and prawns, increased both in terms of quantity and value to 65,906 tonnes valued at Rs. 373.79 crore from 62.744 tonnes valued at 339.86 crore in April-December, 1986.

This was indicated at a meeting convened in New Delhi on February 4, 1988, by the Minister of State for Commerce, Shri P.R. Dasmunshi, to review the progress of export efforts in the marine products sector which is among the 14 thrust sectors identified by the Government for intensive promotion. In the context of the inadequate landings of shrimp and other items, Shri Dasmunshi emphasised the need for a long-term perspective to strengthen fisheries production for exports.

With regard to acquaculture, the Marine Products Export Development Anthority is already setting up two prawn hatcheries in Orissa and Andhra Pradesh at an estimated total cost of Rs. 2.56 crores and Rs. 2.95 crores respectively. These projects, scheduled for completion by 1988-89, are designed to produce 25 million and 40 million prawn seeds (large) per annum respectively, It is expected that these two hatcheries will yield about 2600 tonnes of additional production of shrimp annually for exports □ □ □

Kerala thermal power plant proposal cleared

The Energy Minister, Shri Vastant Sathe informed the Kerala Chief Minister Shri E.K. Nayanar that the Central Electricity Authority had cleared the proposal to set up a thermal power station at Kayamkulam. This thermal power station will have a capacity of 420 MW in the first stage. However, the CEA's techno-economical clearance is subject to clearance like forest, environmental and civil avaiation and provision of inputs. The state would have also to ensure the water availability for this thermal power station. Only then the Planning Commission would be able to take an investment decision. shri Sathe said. □ □ □

RESERVED FOR READERS

On poverty

'Poverty in the land of plenty (Editorial, What we must do ? —Yojana, 26 January, 88) is a most serious problem confronting our nation today. The editorial makes a very powerful indictmerit of the mess we find ourselves in. I congratulate you for focussing attention on such a vital topic. India is a rich country inhabited by the poor people. Our land is extremely fertile. Nature has favoured us with all kind of seasons. We are richer in natural resources than advanced countries like Germany and Japan. We have got a very large trained scientific and technical manpower. Yet, there is something holding us back. The situation needs to be analysed and remedied. To my mind, nation building does not consist of building roads, factories, five star hotels and other symbols of affluence. These are, ofcourse important, but there are things much more fundamental. Nation building essentially involves character building. This is where we have failed. Let us inculcate a spirit of service and dedication towards the nation among all the countrymen. Let us build an India, where everybody regardless of caste, creed and religion takes pride in being Indian Let us create a society based on equality and justice. Let everybody participate in nation building. This is not easy to acheve, but this is the most fundamental issue. Let our politicians, thinkers and planners pay attention ot these aspects of nation building. There are no shortcuts.

In our country poverty resides in all the rural and tribal areas and urban slums. Our planning has been defective. All development has taken place in urban areas, and rural areas have been totally neglected. As a result population has migrated from rural to the urban areas. Cities have been bursting to the brim. All the facilities have proved inadequate. Slums have been created. On the other hand villages have been neglected. Educational and medical facilities are lacking. Job. opportunities are non existent. Their buying power has not increased. People are forced to live below subsistence level. This has led to migration of population from rural to the urban areas. The trend needs to be reversed. Gandhian model is still the best, for a country like India, if we have to ensure equitable distribution of income. Our people have suffered too long. This is the time that a dent is made in the poverty.

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I congratulate you for bringing out a very thought provoking special issue of YOJANA dated 26.1.88 on the "Anatomy of Poverty", which has been and will be the No. 1 problem of India for long. Of all the definitions of poverty, the one suggested by Shri Kameshwar Chowdhary, that it should be based on the food and non-food requirements for a 'decent human existance' appears most sensible and reasonable, according to which about 75% of the Indian population has to be considered below the poverty line. While Shri Vasant Sathe deserves congratulations for boldly urging the top political leadership in the Govt. to formulate policies synthesizing the economic models of Gandhiji and Nehru through a non-exploitative faster growing economy to shape the destiny of the 800 million people, one wonders how far the challenge will be taken up. Dr. Malcolm Adiseshiah's call for a national renaissance where rich and powerful will give up part of their wealth and power, and Shri C.J. Daswani's hope for every individual to raise his consiousness to bring about values of simple living and social commitment giving up the Present culture of self seeking acquisitiveness and consumerism may remain only as fond hopes.

While all the 3 approaches to remove poverty, viz (1) trickle down theory (2) asset transfers through land reforms, and (3) direct attack on poverty through employment generation programmes like RLEGP etc. have not fully succeeded, any radical structural changes like further land reforms may be unrealistic to hope for in the present political scenario which is based on the existing socio-economic power bases. Further radical land reforms so late now have lost their relevance for any effective redistribution of productive assets, as the rich have shifted their investments from the agricultural lands to urban real estate, bank deposits, gold, shares and stocks in own and benami names. Still, if the political leadership is reasonably committed and clear-headed, it can seriously consider implementing the

more urgent measures like the following without the risk of upsetting the political applecart :

1. Speedily controlling population growth by a vigorous family planning programme based on effective incentives and disincentives mobilising the services of mohallah level community leaders, especially the women, combined with better child care through universal coverage of immunisation and nutrition.
2. Allocating more budget for education, especially to school and joboriented education to develop desired values and skills,. drastically pruning the many illequipped colleges and universities churning out low quality graduates, limiting the higher education only to the meritorious to produce the required number of doctors, engineers, managers, scientists etc. Only at the centres of excellence like IITS and selected universities.
3. Allocate much more budget, say upto 5% of the GNP for poverty alleviation programmes like IRDP, RLEGP etc. by selecting viable schemes both for generating employment in rural and urban areas, and also to create lasting community assets like tanks, minor irrigation projects, combined with area (block level) development approach with stattutorily decentralised planning and Panchayat Raj set up to usher in a real people's participation in development.
4. Speedy development of infrastructure and basic inputs like irrigation, power, transport, telecommunications, banking, steel, coal, cement, fertilisers etc. through autonomous bodies managed by private sector with public control or workable public enterprises giving them real autonomy while making them accountable for results. This should be combined with radical pruning of the public sector by privatisation of all sick, consumer and non-monopoly industrial goods units (textiles. cement, scooters, electronics etc.). Liberal voluntary retirement schemes for employees and labour participation in management can be used.
5. Reorienting and symplifying industrial licensing policy to massively increase production of wage goods while drasically curbing luxury consumer goods to discourage the growing consumerism, combined with an effective mechanism to check monopolies and big business houses (which are often obtaining liberal institutional finance and bleeding some of the units into sick units by misappropriating their capital). Entry of medium and large industrial units into labour intensive areas like textiles should be banned. forcing the existing units to gradually export their entire production.
6. Devising a simplified savings and investment scheme and taxation laws to encourage investment and minimise tax evasion especially in urban assets like real estate and benami shares and stocks. For example one or two investment/stockholding corporations can be set up to channelise all savings instead of the present multiplicity of agencies like National Savings, Postal, UTI, LIC, Banks etc. Similarly a single indirect tax like excise duty (abolishing the sales tax etc. being imposed by the State Govts) with more share to states is advisable to reduce duplication, corruption and harrassment. Likewise direct taxes should extend to urban and rural assets and incomes minimising evasion effectively.
7. Concentrating our investments in R&D in only appopriate technologies, and in relevant frontier areas like space science for developing our telecommunication etc. Quickly increasing our agricultural yields, especially in oilseeds and pulses is a must.
8. Promoting proper work culture in our Govt. offices and public administration by proper training, appraisal reward and punishment mechanisms. For eg. instead of leaving the power to transfer middle and senior level officers in the hands of political bosses, UPSC like statutory bodies can be set up to promote independce and honesty in their working.

If the political leadership fights shy of the needed commitment even to chose the moderately hard options as above, which may not really upset the political applecart, then all the thinking people and the millions of poor of this country who reposed their faith in the elected leadership may blame the latter for its 'cowardice' as rightly pointed out by Shri Sathe, and may resort to more and more 'organised protests and struggles' as pointed out by Shri Kameshwar Chowdary, since their hopes and expectations have been sharply aroused by the leaders themselves, and such protests cannot be dismissed as mere law and order problems.

K.P. Prabhakar Rao
R.R. Pet, Eluru, Andhra Pradesh.

Lacunae in Planning

It is extremely unfortunate and at the same time strange that nothing substantial has been done to improve the conditions of the poor. The stark naked poverty that mocks at the government figures is displayed in the working condition of the labourer who is unaware of the progress that is the sole reserve of minority, in the poor rural farmer. Conditions of the farmer may be slightly better in the green revolution areas but otherwise it appears that most of their 'tribe' is living in the 19th century; however, of and on, getting a taste of the 20th century programmes, percolating down to them with innumerable hinderances on the way.

The natural result of the poverty existing at the village 'micro' level results in migration to cities. It is high time that the planners think of basic micro level planning. It is the need of hour. To have a model that is programmed to the development of a village, will go a long way in arresting the deteriorating conditions of the villagers. Planning, that is micro and starts from the bottom will be the answer to the macro level planning, that has been largely successful on paper.

Any development process that starts at the village level should, firstly, directly satisfy the needs of the villages and, secondly, it should try to develop the micro level planning process. For example import of high-tech at village level should not reflect the macro level linking but should be embedded in the micro level need. Computers, if installed at the village, should not be showpiece of high tech development but should be used in things as determining crop patterns or in matching employment needs to resource utilization.

Economic thinker should come out with models of planning that are applicable to trigger development from the grassroots level than to impose development from above.

Mohan Kapoor
H.P. University, Simla

(Contd from page 9)

Howrah via Nagpur and Bombay VT-Delhi via Central Railway are expected to be completed by 1990-91.

Concessions

Shri Scindia also announced a large number of concessions. For the recipients of the Republic Day bravery award, travel will be totally free for these children till they attain the age of 18 years. A 50 per cent concession will be given to teachers honoured by the Republic Day National Award. The same degree of concession will be given to recipients of the Arjuna Awards. Workers honoured with the Prime Minister's Shram awards will be given 75 per cent concession and a similar concession will be given for the widows of all policemen killed in action against terrorists and extremists.

He put the target for loading of revenue-earning freight traffic for 1988-89 at 303 million tonnes, against the current year's target of 292 00 million tonnes.

The shortcomings

Although Shri Scindia can derive satisfaction from the performance of the Railway assets like wagons, he might look into two aspects of railway operations in which glaring shortcomings have been apparent. First although the Mathura-Ratlam-Vadodara section of the Western Railway,s Bombay-Delhi trunk route has now been fully electrified (Bombay-Vadodara and Mathura-Delhi were already electrified earlier) there are not enough electric locomotives now for converting all trains, freight and passenger, to electric traction from steam and diesel traction.The same is the case with Delhi-Jhansi section too.

Secondly, the utilisation of both the electric and diesel locos needs to be improved. The engine-kilometres per day per electine loco for goods traffic in 1986-87 was only 400 kilometres, not much higher than the 380 kilometres attained in 1982-83. In case of diesel, it was slightly better, 427 kilometres compared to 364 in 1982-83. In passenger traffic the figures are 739 kilometres for diesel locos and 458 kilometres for electric locos. In case of the former, there is a decline from 764 in the previous year and for electric, it is at the same level as in 1983-84 when it was 457 km. □□□

(Contd. from Page 12)

In conclusion, the Survey also drew attention to some long-term issues including urbanisation, population and education. It noted that the rapid growth of India's urban population had posed a new set of challenges which require decisive action. The Survey expressed concern about the continued high growth rate of overall population and called for a number of measures to reduce this growth rate. Particular attention was drawn to steps aimed at improving female literacy, the general status of women, and improvements in the health delivery systems.The survey emphasised the importance of education for sustained and equitable economic development. It pointed out that education offered the invaluable key to advancement to those trapped in the cycle of poverty. More broadly, the Survey called for the spread of low-cost, high-quality social services as essential pre requisites, both for the improvement and enhancement of the living standards of poor people today and for strengthening the human capital base for longterm development. □ □ □

Courtesy : PIB, New Delhi

Over ten per cent industrial growth during April-November 1987

During the period April-November, 1987, the industrial growth rate was of the order of 10.2 per cent as against 7.5% during the corresponding period of 1986.

Stating this in reply to a question in Lok Sabha on February 23, 1988, the Industry Minister, Shri J. Vengala Rao said that the decelaration in industrial growth since August, 1987 was not due to industrial sickness but the drought of 1987 which was expected to cause a decline in the rate of growth of industrial output in the latter part of the financial year 1987-88. He said the government had taken a number of measures to stimulate and sustain industrial production which inculuded appropriate liberalisation of policies and procedures, fiscal and financial incentives for enhanced production for domesticand export markets, technology upgradation scheme for modernisation of selected capital goods industries, ensuring availability of industrial raw-materials and improving the performance of infrastructure industries.

BOOK REVIEW

MIGRANT LABOUR AND RELATED ISSUES : Edited by Vidyut Joshi. Published by Oxford & IBH Publishing Co. Pvt. Ltd. 66-Janpath, New Delhi 110 001. First Published : 1987. Pages 334. Price Rs. 125.00

While migration of labour has been taking place now for a very long time, concern for its welfare has been evident only in recent times. The migrants being generally from the lower strate of the society. are illiterate and impoverished, they are generally employed for short duration, on low wages and with an element of their exploitation. Even the International Labour Organisation in a report published in 1980 said that "Far from their country, faced with new living condition that are entirely unfamiliar to them, ill-prepared to defend their interest in surroundings where they meet frequently with more indifference and sometimes with hostility, migrant workers more than others are liable to exploitation, particularly if they are in irregular situation and the victims of manpower trafficking."

This then is their condition everywhere, including India. To discuss this and other related issues, a seminar was held at Gandhi Labour Institute in Ahmedabad in October, 1985 and this book contains papers read therein. Editor Vidyut Joshi has done an excellent job of presenting them in a thematic manner so as to become quite readable and beneficial for social workers and researchers. In all there are 25 papers including the editor's introductory remarks Documentation given is adequate as far as its availability is concerned.

As per the census of 1981 it has been estimated that the total population of migrants (with birth place creiterion) in the country was 665.3 persons in which 343.9 were males and 321.4 were females. This number has grown over the years consistently after independence of the country In India we have mainly two. They are (i) Contract Labour (Regulations and Abolition) Act, 1970 and Interstate Migrant Workmen (Regulation of Employment and Conditions of Service) Act, 1979. Later on, the Bonded Labour Abolition Act was also passed though it did not directly deal with migrant labour only.

Interstate migrant labour forms a large part of contract labour. In its turn, contract labour is by and large bonded labour. It is to be found both in agriculture and industry.

Most of the papers in the book have analysed the present situation of migrant workers, their working condition and as to what could be possibly done for their rehabilitation.

One paper states that the definition of 'Interstate Migrant Workman' is defective in the Act when it says that he is one who is recruited by or through a contractor in any state under an agreement or other arrangement for employment in an establishment in another state, whether with or without the knowledge of the principal employer in relation to such establishment. It is well-known that a large number of workers, particularly agricultural, migrate of their own accord from States like Bihar and Uttar Pradesh every year to Punjab and Haryana during the sowing and harvesting seasons for work. Similarly, a considerable number of construction workers also come on their own from Andhra Pradesh, Bihar and Rajasthan to Delhi in search of work. Such workers are clearly out of the Act. Unscrupulous contractors reap all the benefits of their exploitation.

Although there are many welfare provisions for migrant workers, they are not being implemented due to weak position of such workers. Perhaps, time has come to do away with middlemen by promoting labour cooperatives. When producers cooperatives can flourish, why not labour cooperatives be successful. Also, we need to give recognition to the right to work as a fundamental right This would require building of a new ethos and a new labour policy. Labour migration should not be allowed to function in isolation and policies and programmes meant for them should be implemented in all earnestness by the Government.

Navin Chandra Joshi

BUDDHIST SHRINES by D.C. Bhattacharyya. Publications Division, Ministry of Information & Broadcasting. 1987. Pp. 45. Price Rs. 25.

Though now almost extinct in its land of origin, Buddism has been one of India's principal contributions to the humanity at large. Buddha's teaching was a frank recognition of the facts of life, a just estimate of their values. It is the one religion that calls upon man to trust himself and to govern himself. Its clarion call upholds human liberty.

Tradition has it that Gautama Budda in his death bed had suggested to his followers that stupas should be built over his mortal remains so that they could symbolise the presence of the Buddha even after his physical absence. The book under review is a crisp description of not only these stupas but also of the other sacred places in the life and legend of the Buddha in India and abroad. The descpirtions deal with both history and legend as also the architectural pattern of these shrines. Written in a simple style this short yet exhaustive description of the Buddhist shrines would prove popular not only with the students of the

Buddhist history but also with the lay readers interested to know something about Buddhism. The production of this book is neat although one wished that a dash of colour should have been there for the photographic illustrations.

P. Ghosh Dastidar

Builders of Modern India:Jyotiprasad Agarwala by Iswar Prasad Choudhury, Publications Division, Price Rs. 15, Pages : 108.

People of the Indian sub-continent have always had the gift of assimilation. No matter where they have migrated in search of better living, their identification with the local population has been complete by and large. This accounts for their easy acceptance everywhere. People from Gujarat and Sind have gone all over the world since ancient times. In the 20th century migration became so commonplace that there may be very few places on the globe where Indians have not gone. Within the country as well there is no dearth of persons who have distinguished themselves in places far away from where their mooringg lay originally.

Jyotiprasad Agarwala is one such personality. He is a famous name in Assam although his ancestors hailed from Rajasthan. He is remembered as a great patriot and literateur of Assam.

Jyotiprasad was borm in 1903 in Dibrugarh, upper Assam. He spent his childhood in an atmosphere charged with patriotism, literary activities and nationalist songs. He was educated in Calcutta and Edinburgh universities. The subjects of his study were as varied as economics, sanskrit, law and philospphy. The instinct of poetry was inherent in him, He also developed as a successful playwright. Each of Jyotiprasad's dramas has its distinct personality as it were. Each of them represents a milestone in Assamese dramaturgy. He introduced new ideas of stage-craft and direction. KARENGAR LIGIRI is his masterpiece and one of the best Assamese dramas written so far. It projects certain social problems of the Assamese Society which had not been dealt with earlier. LAVITA, his another play portrays the revolutionary phase of the Indian freedom movement of 1942 The central character, Lavita, represents fearlessness, tolerance, strength of character and sacrifice Today Lavita symbolises the self-confident, socially-conscious, liberal minded Assamese youth.

He also experimented with film making. The creative artiste that he was, he sought to make films to project the rich and district Assamese culture. This attribute singled him out from his contemporary film makers.

An interesting sidelight of his career needs to be recalled. While making the film Joymati, Jyotiprasad was faced with the problem of finding the right person to portary the central character, Joymati. It was not easy to find ladies to play the female roles. At last he found a teenage village girl, Aideo Sandikai, for the role. The simple girl had no idea of acting and he took great pains to train her. Aideo's performance was superb and the older generation still cherish her role. But the tragedy in Aideo's life began the moment she went back home. She was ostracized by the village people. A priest was called to 'purify' her of her 'sin' of acting in a film. But still she was to remain boycotted for three years. She was not allowed to draw water from the village well. Even her mother would not allow her to enter the kitchen. In a particular scene in the film, she had to address the actor playing her husband. So no one came forward to marry her. Aideo Sandikai remained an spinster all her life, She was so mortified at the treatment that out of shame she did not see the film Joymati although she had acted in the title role.

Jyotiprasad's songs appealed to the people for their sweet language and melodious tunes based on the classical ragas and folk-lores. He acknowledged the influence of Lord Krishna, Shri Shankardeva and Mahatma Gandhi on himself. To him Krishna symbolised Indian culture and Shri Shankardeva was the greatest Assamese of all times whose genius is reflected in every walk of Assmese life. He believed that Gandhiji is the greatest Indian born till date. His literature reflects the values imbibed from the teachings of the trio in ample measure. Jyotiprasad was an accomplished intellectual. He was much ahead of his times. He symbolised the rebellious intellectualism which was a necessary condition for the over all development of society. He wrote in one of his poems

I am the fiery youngman
Of Assam, of Bharat
I am the new son of Bharat
Blowing trumpet in Purbachal.

Thus he represented the consubuness, ambition and self-confidence of the younger generation of different athnic groups in the north-east.

The book is well-researched and gives a good insight into the rich personality of Jyotiprasad Agarwal. But a little more editing would have improved the book. The chapters are disjointed. It could have been avoided.

Yet the book is quite readable.

S.M. Kumar

Rs. 45 Crore to control shifting cultivation

A scheme for control of shifting cultivation has been launched this year in nine States with 100 per cent assistance to State Plans. An outlay of Rs. 45 crore has been approved for the last year of the current plan. The Minister of State for Agriculture Shri Yogendra Makwana, told the Rajya Sabha on December 11, 1987 that the scheme envisaged permanent settlement of the jhumias through developmental programme such as land development, irrigation and supply of inputs required for permanant cultivation along with assistance for subsidiary occupations.

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Is education still on the beaten track ?

Kameshwar Choudhary

Analysing the new educational policy, the author puts the Government on alert that given the present scenario, there is every possibility of validating the observation of United Nations that the majority of the total number of illiterate population in the world will be in India by 2000 A.D He says that vocationalization of secondary education has remained a pious hope so far and laments that the Government had abandoned progressive and egalitarian recommendations of Kothari Commission. To set the things right, he asserts, a radical transformation in economic, political and social sub-systems is urgently needed.

IT WAS WELL RECOGNIZED by our national leaders that the colonial system of education was structured to fulfil British colonial interests and hence not suitable for India But despite realising the urgent necessity of reorganisation and reorientation of education to serve national needs and interests the Government of free India took about twenty years to assess the exact nature of educational situation and its restructuring Moreover, in the beginning the problem was seen in a fragmented way This is evident from the fact that first commission on education in Independent India (University Education Commission, 1948-49) dealt only with University education and the second one with secondary education (Secondary Education Commission 1952-53). An integrated approach dawned only with the Education Commission, 1964-66 which dealt with from pre-primary to university stages of education.

Thus, after two decades of dilly-dallying first National Policy on Education was promulgated by the Government of India in 1968 Further, though 1968 policy provided for a review every five years, the Government of India took another eighteen years to come out with a policy and programme of action (1986). In the meantime, the Janata Government enunciated its National Policy on Education in 1979, which remain unimplemented due to its ouster from power at t Centre All this shows that the Government of India h adopted an unserious and cavalier attitude towa education though its pronouncements have been on t contrary

After all, we have three national policies on educati till date, i e., 1968, 1979 and 1986. Here a pertin question would be whether we have really strived restructuring of education on the levels of approa policy and implementation And that in what way we h made departures, if any, from the Sargent Plan of 19 which was formulated by the colonial governme though not implemented.

Education vis-a-vis other sub-syste

Conceptually speaking, we have overemphasized t role of education in national development. It interesting to note that the Sargent Plan and t Kothari Commission have made similar observations this regard. The Sargent Plan observed, "Upon t education of the people of this country the fate of t country depends". On the same line, the openi paragraph of the Kothari Commission proclaimed :

"The destiny of India is now being shaped in her classrooms. This, we believe, is no mere rhetoric. In a world based on science and technology, it is education that determines the level of prosperity, welfare and security of the people."

Thus, education has been viewed as a determinant of social transformation. But the reality is entirely different in our country or elsewhere. Other sub-systems of society, e g., politico-economic structure and socio-cultural setting play equally vital or even more important role in societal reconstruction. In fact, education is a weak sub-system of society and it is largely shaped by politico-economic sub-systems of society

Further, education plays both functional (positive) and dysfunctional (negative) roles with regard to different social strata in society. In a socially stratified society education system is geared by the privileged class to perpetuate and strengthen its superior status That way it is functional to them. But the education system proves to be dysfunctional to the underprivileged class in the sense that educational deprivation perpetuates and reinforcess their subservient social position In fact, only in an egalitarian society education system could be functional to the society as a whole This fact has not been properly recognized by our planners, administrators and academicians.

Moreover, despite proclaiming a pivotal role of education in national reconstruction, education has been taken to be a 'social service' rather than an 'input' in the development process. There has been a change at the conceptual level beginning with the Sixth Plan wherein education is considered to be an important input in human resource development. But the programmes adopted do not show any significant change at empirical level in the prevailing educational situation

Elementary education

At the elementary level, the Sargent Plan aimed at achieving free, compulsory and universal education (till the children attain the age of 14 years) within a period of 40 years, i e., 1944-84. Considering this to be a very long period our Constitution (1950) directed the State to reach this target within 15 years i.e. by 1965. But in 1965-66, enrolment at the primary level (6-11 age group) and middle level (11-14 age-group) could reach 76.7 per cent and 30 9 per cent of the specific age-group respectively (Fourth Five-Year Plan).

Further, national policy on education 1968 did not make any commitment regarding time period in this regard and only hoped for the 'early fulfilment' of the constitutional directive. The unimplemented education policy of the Janata Government (1979) made a commitment to achieve the goal within ten years, i.e., by 1989. Now, the latest national policy on education (1986) has aimed at fulfilling the objective in the 6-11 age group by 1990 and 11-14 age group by 1995.

Constraints

However, the current problems in elementary education are very difficult to overcome. In 1986, approximately 95 per cent children in 6-11 age-group and 50 per cent children in 11-14 age-group were enrolled in schools. Moreover, nearly 60 per cent children drop out between classes I-V and 75 per cent between classes I-VIII These children belong to the backward and poorest strata of our society. Therefore, they could not be expected to be retained in schools unless economic condition of the poor people is appreciably improved. In addition, an acceptably large number of habitations are without primary schools and nearly one-third of the schools in rural areas have only one teacher, Also, the majority of primary schools do not have most essential amenities, such as, water supply, toilet and even blackboard.

The national policy on education, 1986 has called for launching of a programme, symbolically called 'Operation Blackboard' to improve primary schools all over the country through providing for school buildings, blackboards, maps, charts, toys and other learning material. But an effective implementation of the programme is doubtful in a situation of very limited Central assistance to the States in this matter and the States always facing the problem of financial scarcity.

Further, national policy on education, 1968 took a progressive step over the Sargent Plan through providing for the 'Common School System' of public education covering all parts of the country and all stages of school education as recommended by the Kothari Commission (1964-66) to provide equality of access to all children and promote social cohesion and national integation In addition, NPE 1979 adopted the main feature of the common school system, i.e Neighbourhood School Plan which implied that

> Each school should be attended by all the children in the neighbourhood irrespective of caste, creed, community, religion, economic condition or social status, so that there would be no segregation in schools (Education Commission, 1964-66, p 458)

But NPE 1986 marks a retrograde step in this regard because it has failed even to mention the concept of common school system and neighbourhood school plan.

Lastly, our national policies on education have given up Gandhiji's 'basic education' at the elementary level which was incorporated in a modified form in the colonial Sargent Plan.

Secondary education

Our national policies on education have visualized secondary education to be so comprehensive as both to be terminal for those who do not want or cannot proceed for further education, and to have a strong academic foundation for higher studies for those who show intelligence and aptitude for that education (NPE 1979, 4.4). Vocationalization has formed an integral part of secondary education since the Sargent Plan onwards. Vocationalization aims at preparing manpower to meet

the needs of various sectors of the economy, e.g., industry, agriculture, trade and commerce, arts and crafts, public health, etc. Moreover, it is expected to ease the so-called pressure on higher education and promote employability and self-employment.

The Sargent Plan made specific suggestion for vocationalization through reorganising high schools on two streams-the academic and the technical (vocational) But NPE 1968 and 1979 made vague references about diversification of courses at secondary stage. Now, NPE 1986 has advocated vocationalization of plus 2 stage (higher secondary stage) and categorically proposed that vocational courses cover 10 per cent of higher secondary students by 1990 and 25 per cent by 1995. But the target seems to be over-ambitious. Currently, the percentage of students is 32.4 per cent of the total population in 14-17 age-group (India 1986, p.69) And only about 2.5 per cent of students population entering higher secondary stage is covered by vocationalisation so far (NPE 1986, Programme of Action, IV. 1).

Further, NPE 1986 provides for setting up of pace-setting Navodaya Vidyalayas, one each in all the districts of the country. Their broad aims are to serve the objectives of excellence, coupled with equity and social justice. But in actual practice, the NVs will mainly cater to the needs of the rural rich and privileged class and, of course, thereby widening the elite base. The children of small peasants, landless agricultural labourers and slum dwellers could never be expected to compete with the children of the privileged ones due to their economic, political, social and cultural backwardness Moreover, these schools will take a major share of the total financial allocation to secondary schools and thereby further deteriorating the condition of secondary education in general.

Higher education

Though the percentage of students in higher education (17-23 age-group) has never exceeded 5 per cent of the total population in the specific age-group and the total number of pupils at the university stage shows a declining trend in the recent years, from 47 5 lakh in 1982-83 to 35.5 lakh in 1983-84 (India 1986, p. 69); our national policies on education have consistenty emphasized the need for consolidation and strict restrictions on expansion of facilities.

Further, the need for raising standards all round in higher education has been a constant preoccupation since the Sargent Plan till date. For this, it has been emphasized since NPE 1968 that 'Centres of excellence' aiming at the highest possible standards in research and training should be established and strengthened. Following the same line of thinking the NPE 1986 advocates promotion of autonomous colleges and autonomous departments within universities, setting up of national research facilities within the university system with autonomous management and national educational service.

The NPE 1986 has also initiated the Open University System and Distance Learning in order to augment opportunities for higher education. This is a mere logical extension of earlier provisions for correspondence courses and part-time courses which have not achieved any significant success so far. Moreover, this is a blind imitation of the British system, the success of which is very limited in a country with a low level of technological development.

Financial allocation

Government's utter negligence of education is clearly shown by consistent decline in financial allocation to this sector. Allocation has declined from 7.6 per cent in the First Plan to 5.8 per cent in the Second Plan, 6.8 per cent in the Thired Plan. 5.0 per cent in the Fourth Plan, 3.2 per cent in the Fifth Plan, 2.6 per cent in the Sixth Plan and 3.3 per cent in the Seventh Plan. This sharp decline occurred despite NPE 1968 having clearly stated that the investment on education be gradaully increased to reach a level of expenditure of 6 per cent of the national income as early as possible. Moreover, though realizing the problem of acute scarcity of financial resources for educational development the NPE 1986 has stultified the whole issue by stating that from the Eighth Five Year Plan onwards allocation will uniformly exceed to 6 per cent of the national income. It is very much doubtful in view of Government's consistent failure in the past that it would respect its financial commitment in future.

Hollow slogans

Our national policies on education (1968, 1979, 1986) have been always talking of introducing moral education, social service, work-experience and community involvement at all stages of education Had we ever taken well thought-out, systematic and organized steps in this direction, our present educational situation would have been radically different and not facing a crisis as is the case today In fact, all these are slogans meant for public consumption

Conclusion

Thus, we find that our National Policies on Education (1968, 79, 86) have not gone much ahead of the Sargent Plan both at the conceptual and programmatic levels There is nothing much innovative in the new educational policy, 1986. It is a continuation of the NPE 1968. Further, there has been linear expansion of colonial system of education. But the structure and content of education have changed very little.

The Government has been very selective in accepting recommendations of education commissions. It has accepted and implemented elitist measures, such as, model schools at secondary level, autonomous colleges and departments and Centres of excellence at higher level of education But it has neglected and now even abandoned progressive and equalitarian recommendations of the Kothari Commission, e.g., the Common School System and the Neighbourhood School Plan

Therefore, there is no escape from the problem of educational reconstruction which will keep haunting us

(Contd on page 11)

Missing links in our educational planning

Ranjana Srivastava

Even after 37 years of Planning, educational planning in India lacks professionalism and as a result tends to be short-term. Analysing the causes of the failures in planning, the author raises questions crucial for planning and advocates for multi-level/decentralized planning with priorities according to local conditions. Professionalism, a drastic change in organisational and administrative arrangements, as well as in attitudes and behaviour pattern are essential for an effective and meaningful planning, feels the author.

EDUCATIONAL PLANNING IN INDIA is now 37 years old. One of the distinctive features of the post-independence period was a large scale effort to reconstruct education in a planned manner which had no parallel in the earlier history of the country. Increasing attention was paid to education as 'a factor vital to national progress and security.' Several Commissions and Committees reviewed the problems of educational reconstructions. While University Education Commission (1948-49) and Secondary Education Commission (1952-53) were set up to review, and give recommendations for the reconstruction of higher/university education and secondary education respectively, the National Education Commission (1964-66), better known as Kothari Commission, was appointed by the Government to advise on the national pattern of education and on the general principles and the policies for the development of education at all stages and in all aspects. While the first two Commissions dealt with specific sub-sectors of education, Kothari Commission made a comprehensive review of all stages and types of education.

A review of educational planning in India shows a gradual shift from enthusiasm, to disenchantment with the methods of planning and the planning process. In the early years, planners were faced with different kinds of problems and issues of reconstruction of the educational system, and were optimistic about their ability to provide for the educational needs of the country as well as the manpower needs of the economy in the context of scarce resources and ambitious economic development plans. Now the very nature of problems has not only changed but also increased in dimension. An understanding of the present situation of educational planning would benefit from a comparison of the issues then and now.

Issues before planners

After the National Education Commission arrived at a comprehensive analysis of the educational scene in India in the mid 60's, the task before the nation was to evolve a national policy in education in spite of the fact that education was largely a State subject in the Constitution and that a multiplicity of authorities at different levels made decisions an all aspects of the situation. This was not an easy task and as there was little experience to guide the planners and policy makers, it was necessary for us to evolve our own techniques in most cases. We were also faced with the necessity of reviewing and improving our planning techniques. Moreover, it was necessary to evaluate our programmes continuously and increase the effectiveness of the investment in education.

Thus, as a result of discussions and deliberations on the report of the Education Commission, a consensus emerged and a National Policy on Education was enunciated by the Government in 1968. Educational

activities in India until recently continued to be guided by the said policy. Initially, educational planning dealt mainly with quantitative concerns, for instance, number of schools, class rooms, teachers and students, costs for expanded schooling at different levels, provisions in the best possible manner of manpower needed for the growing economy. During the later years, educational objectives laid more stress on further democratisation of education, greater access to education, better educational opportunities for the disadvantaged, better regional equity, increased range of educational opportunity, increased vocational bias in the curricula, greater relevance to socio-economic needs, alternative strategies, broadening of the concept of continuing education, increasing access of women to all levels of education, and awareness of environmental problems.

Thus the current decade winesses a shift in emphasis from expansion to consolidation of facilities and improvement of quality in education. However, in spite of major expansion that has taken place in the educational sphere, eradication of illiteracy in the country and the universal provision of educational facilities to the school going age population still remain the national priorities that have yet to be translated into actual gains.

The new policy

The new policy on education treats education as unique investment in the present and the future: the cardinal principle which is the 'key' to the National Policy on Education (1986). The new policy lays stress on equalisation of educational opportunities, reorganization of education at different stages with special emphasis on quality improvement, efficiency and effectiveness at all levels, reorienting the content and process of education, utilization of modern communication technologies, an overhauling of the system of planning and the management of education and the like. In view of these imperatives, the policy regards education as 'a crucial area of investment for national development and survival.'

Problems

The educational planner, today, is thus confronted with a variety of tasks. The concern now is not only for scarcity but also for improvement of the educational system. Such being the case, the key questions which the planner today is faced with may be broadly enumerated as follows:

(1) The planner today is confronted with the task of defining the priority objectives and the functions of the educational system and of each of its subsystems. It is to be remembered that planning operation is distinct from approval and implementation, neither of which is essential to the definition of planning. However, the implementability of various decisions is necessarily to be kept in view. Once the plan is approved and priority decisions adopted as policy, the planner is obliged to indicate the ways of implementing the same.

(2) After defining the priority areas, the planner, therefore, ought to be able to outline the best of the alternative ways of pursuing these various objectives and functions. Since educational planning is essentially the process of preparing a set of decisions for further action pertaining to education, there is an inevitable need to outline the alternative paths of pursuing these objectives and selecting the best among them to attain specific objectives.

(3) The planner should also be in a position to assess the financial requirements of the educational system and set the limits of feasibility of resources that can be effectively absorbed in the given time period. In a resource scarce economy, it is first necessary to set the limits of what is feasible and available for education. Assessing the financial requirements of the educational system is of course useful in so far as it gives an estimate of our resource requirement in order to implement the plan successfully. However, the available resources may be very much less than the total resources required for satisfactory implementation of the plan which, therefore, renders the whole process quite useless and extravagant. Hence the need for defining the feasibility and availability of resources.

(4) There is an increasing need to identify alternative sources of financing education, both monetary and non-monetary.

(5) The planner is also responsible for allocating the total resources available to education among different levels, types, and components of the system rationally, reflecting the priorities of the planner.

Planners' dilemma

The task of the educational planner becomes complex because the planner has to view the economy as a whole and attempt to seek on optimum balance among its sectors in the face of overall resource limits being faced with two central problems: (a) allocation problem, and (b) the efficiency problem. While the former is concerned with the distribution of use of these resources, the latter deals with effective use of these resources, once they are allocated, to get maximum output. Educational planning as a process has come to mean different things to different people. But it can safely be said that educational planning is an attempt to achieve an efficient and rational allocation of resources to the education systems of a nation or a part of one.

There is no doubt that the educational planner is also concerned with the determination of the best way to help achieve a reasonable balance between intricate internal and external relationships of the educational systems under dynamically changing circumstances and to bend them constantly in the required direction.

The ideal concept of educational planning, as nsualised by the first generation of educational planners nvisaged, first, as embracing in orderly fashion ll the levels and forms of educational activity, both ormal and informal, and second, as being fully ntegrated with the country's economic and social plans, o that education could serve more effectively the needs f both the nation and the individual. They realized that ormulation and implementation of an educational plan aised a series of institutional and administrative roblems, that is, structural and procedural problems, hich called for solutions. The essential condition that plan must fulfil, as visualised by them, is that a plan ust be applicable and second, the machinery necessary or its practical application must be available. In espect of the first prerequisite for successful planning, hen, an educational plan must occur as the result of a eries of successive choices; second, as a collective task nd third, as a means of action. The latter pre-condition equires that in a democracy, the Government must ake a special responsibility in the elaboration and mplementation of an educational plan, and prepare the achinery for undertaking the additional task.

Drawbacks in planning

In the light of the above, we are now in a position to nswer questions crucial to educational planning in ndia. First and foremost, has planning in India been a onsequence of successive choices? Have we been able define the limits of what is possible and feasible? Do e have an economic rationale to educational planning? o we have a long-term vision of the educational scene hich indicates to us the short-term and the immediate oals of education? Are those responsible for planning ained in the techniques of planning? Do we have a odel of educational planning whereby we can clearly dicate our choices, priorities, and strategies? An nalytic response to these and other similar questions ads to the conclusion that the educational planning rocess suffers from the following weaknesses:

(a) There is a total absence of an economic rationale to educational planning. Though contribution of education to economic development has never been in doubt, decisions regarding resource allocation and efficiency have never been taken in a rational manner. As indicated erlier, the first aim of planning has to be an accurate analysis of what is possible and what is desirable. In India, where finance is not of secondary but primary importance, the desirable can only be achieved in part. Thus, the planning exercise needs to define first and foremost the limit of what is possible, i.e. the proportion of national income that can be devoted to education, taking into account the competing needs of other, no less vital, sectors. Once a decision has been made on the share of education in the Gross National Product, an order of priority needs to be drawn up for those educational activities that are desirable. But the experience of Indian planning is quite otherwise The allocation to education is the last, not the first step in the entire exercise. Thus, there cannot be alternative paths and planning cannot be a consequence of successive choices if the share of education is not known at the beginning of the planning exercise.

(b) Educational planning still remains to be fully integrated with economic planning. We have not yet reached the take-off stage in educational planning which has resulted in wasteful imbalances within the educational system, integration of educational planning with economic planning implies paying attention to both internal and external relationships in education, especially the linkages between the outputs of the educational system and the requirements of the labour market. This approach reflects an orientation to planning of production and employment and undertaking of detailed exercises in respect of national and local level requirements of manpower in various developmental activities and sectors. If educational planning has to be linked to manpower planning and imbalances between the demand for, and supply of various types of manpower are to be avoided, educational planning in India must become an integral part of each development sector. But experience shows that even this approach was not practised fully. Even though forecasts of highly specialised manpower were made in the early years, there was no effort to regulate enrolments accordingly. It may be worthwile to remember that educational plans cannot be fitted into economic plans simply by embodying the educational 'investment' programmes in the national investment programmes. What is important is the link between the two which is forged by forecasting of educational needs and taking a long term view of the economy so as to regulate the output of the educational system accordingly.

(c) Our planners have yet to realise the importance of long term planning in education and acquire the techniques to plan the same. We must recognise that long term planning is essentially a different kind of activity from short term and medium term planning Long term planning is an attempt to gain control over the future, to reduce the intrinsic uncertainty of the future to manageable proportions. But planning in India has been basically for a period of five years and we have continued to exist from one five year plan to another five year plan. Even though the seventh five year plan has drawn a perspective of the year 2000, detailed planning has not been done for the year 2000, which would basically mean, (a) vision of the future either as an extrapolation of the present, or the present but with some technogical dimension, etc., and (b) exploration of alternative scenarios in education from which will derive the short term and the medium term goals and objectives. At present in short term educational planning we are not concerned with setting goals (although we may aid in setting goals by giving a diagnosis of the system), we assume that goals have already been

set and the task is to draw up plans that will enable us to reach these goals. Long term planning in education requires a long term (15-20 years) view of each and every sub-sector of education based on past experience, present policies and priorities and consequences for the same for the likely emerging pattern.

(d) The overall approach to planning has largely been in terms of macro aggregates. This approach represents only a stage, and an early one at that, in the planning process. Our planning must move beyond the confines of the national aggregates to take account of regional and social differences within the country. Detailed studies of the differences between the rual and the urban areas, sexual inequality and social differences need to be undertaken in order to plan, cost-effectively, paths of removing these disparities. Today the lack of availability of data, particularly in the rural sectors, hampers any approach to disaggregated and local level planning. Lack of availability of any kind of data is a serious constraint in educational planning.

(e) Another weak link in our planning process is the nebulous relationship between the planners and the private sector. We have neither succeeded in involving the private sector in the planning process nor have we been able to collect any information regarding developments in education in the private sector.

(f) The task of planning has been left in the hands of non-professionals. Planning is a specialised activity, yet the professional identity of the planners has yet to be established in our country Many of our planners with distinguished careers are often completely ignorant of many of the skills and the basic conceptual tools which are required of planners Preparation for planning requires formal professional education, training of the planner whereby training in 'planning' is added on to the disciplinary foundation of those responsible for planning. Planning is a distinct activity and educational planner is placed in a position where he ought to view the education system as a whole (and not in parts) and consider the relationship to economy and the society at large Because of lack of professional education and training in the activity of planning, educational planning in our country is done neither in terms of values and concerns of the educators nor in terms of the concerns of the economists

It may not be out of place here to identify two aspects of educational planning : (i) planning of the educational system as a whole . its expansion, improvement, the balancing of its different parts, its auxiliary services, etc. based essentially on effective demographic and statistical technique, projection of labour market needs for various levels and categories of manpower, etc. and (ii) the planning of special branches of education, such as teacher training, science education, curriculum development, adult education, etc., which are concerns basically of the experts in the fields whose task is not to constrict the whole system, but to think professionally about their own specialisation and provide for the maintenance of its standards and numbers within the wider context of the development of the whole system. It is the former kind of planning, i.e. planning of the educational system as a whole, which has suffered on account of non-professionals who have paid little attention to the working of the educational system within the context of a wider socio-economic system.

What is needed

Particular needs for improvement stand out within the framework of educational planning as it has been conceived in recent years. First and foremost, it is now widely felt that there is no one approach to educational planning, the various traditional approaches must now be synthesised into a coherent, unified approach Second, the numerous methodologies required to apply this unified approach must be further refined and strengthened Third, there should be concerted effort to improve information flows needed for effective planning Next, appreciation of planning must be instilled in those whose participation in the planning process is essential. What is required is an intensive effort towards professionalization of planning and drastic alteration in organizational and administrative arrangements, attitudes and behaviour patterns in order to accommodate effective planning.

Machinery for planning

The educational machinery for effective planning leaves much to be desired. It is neither adequately staffed nor is the personnel engaged in it suitably trained. In spite of so much emphasis that has been laid on multilevel planning, there is hardly any educational planning done at the district level. The planning cells in the directorate of education are inadequate, understaffed and the existing staff consists mostly of those who have had no training in the field. Their work is also mostly administrative and financial and confined to the compilation and reporting of educational and financial statistics. There is need to conduct intensive courses for training the personnel involved in the process and techniques of educational planning.

Decentralization

The process of educational planning in a federal democracy like ours has to have the right blend of centralization, in the appropriate sectors, with a large amount of decentralization in other sectors and especially in administration. For this purpose it would be useful to adopt a system of priorities at different levels—national, state and local. Programmes of national significance should be regarded as national priorities and decision for this should be taken in consultation with States. Once the decisions are taken, it should be obligatory for States to implement them effectively and vigorously. In formulating State level priorities, States

should be left to make their own best decisions in view of local conditions and it may not be necessary to adopt a uniform pattern among various districts. The uniform pattern otherwise will jeopardise the very concept of local level planning where specific needs and requirements of a defined area are taken to be the main concerns. The roles of different agencies providing education needs to be redefined. Central Government, State Governments, local authorities, and voluntary organizations have been providing educational facilities in the country. Centre-State relationships in respect of various sectors and activities need to be redefined in terms of areas of responsibility to be discharged by each. For example, school education is predominantly a local-state partnership; the day-to-day administration of schools can be delegated to duly constituted local authorities. Higher Education is a Centre-State partnership. Similarly within the States, appropriate partnership can be worked out between district-state and block-district in respect of certain identified activities.

Conclusion

To conclude, the importance of educational planning, in the true sense of the term, needs to be re-emphasised. Education must become an integral part of developmental planning. It must cease to be regared merely as a component of social welfere. Our planners need to realize that education is not a sector parallel to other developmental sector. Thus education must be made an essential part of all poverty alleviation, rural development and employment programmes which do not so far have any component of education. Even the Seventh Five Year Plan which seeks to alleviate poverty through programmes of human resource development has failed to take cognizance of the integral nature of its character. Experience of the past forty years has shown that it is not the lack of demand but lack of capital which is responsible for our slow approach towards self-reliance. We have not been able to equip our labour force with the capital content that will lift them permanently above the poverty line. Education helps in alleviating poverty even if only indirectly, but we have failed even to acknowledge this connection.

The Planning Commission now avers that the next two five year plans are going to be crucial for initiating the process of self-sustaining growth and achieving the needed transformation of economy as it enters the 21st century. But in the absence of right kind of education, can there be a real transformation, and how will the process of self-sustaining growth be initiated? Has this not been an objective of our five year plans since the very beginning of planning as a deliberate, conscious activity in the country? If, as official documents show, the Indian economy has shown 'good performance' in terms of annual trend rate of growth during the last plan, it needs a well equipped and educated labour force to maintain the steady path of growth. Why have we failed to recognise this simple fact? Why, among the twelve major policy issues identified by the Planning Commission for the 8th and the 9th plans, education for the work-force is conspicuous by its absence? In fact, there needs to be a thorough discussion on how to make education an integral part of all developmental plans. It is not merely sufficient to say that vertical and horizontal linkages should be maintained. The whole process of developing linkages, maintaining coordination, identifying delivery mechanisms need to be duly outlined. Education must become a function of all departments. Administrative and organizational machinery for developing such human resources needs to be adequately identified. The success of planning as an instrument of development will depend on a proper understanding of the very process of development and the role that educational planning can and should play as part of this process.

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even in the 21st century. Our constitutional goal of free, compulsory and universal elementary education would not be achieved in near future in a situation of non-involvement of the people and meagre and declining financial allocation. The quantum of adult illiterates would also keep increasing which could be easily perceived from the fact that despite all exhortations to the cause of adult education the total number of illiterates has increased from 3,009 lakh in 1951 to 4,376.3 lakh in 1981 (India 1986, p. 72). Moreover, the rate of illiteracy is also very high (65.4 per cent of the total population). Such a grim situation has all the possibilities of validating observation of the United Nations that the majority of the total number of illiterate population in the world will be in India by 2000 A.D.

As regards quality improvement, the Government will remain highly selective in future as now. Vocationalization of secondary education will remain a pious hope because of a lack of a conducive environment of radical socio-economic transformation which would generate ample employment opportunities. The educational policy of the Government will tread its customary elitist path in view of severe financial constraint, lack of political will and low level of people's awareness. The dual system of education, superior one for the privileged and inferior one for the deprived will continue.

Therefore, we can say that the task of educational reconstruction, on a socialist and democratic line which we set out to achieve after Independence will remain largely unachieved in near future. As education is a relatively weak sub-system of society, a radical transformation of educational system could only accompany a radical transformation in relatively strong sub-systems of the society, e.g., economic, political and social. □

CABE reviews New Education Policy

Yojana correspondent

THE NEED TO HIGHIGHT the well-being of the child, awareness about health living and the small family norm right from the elementary education stage, was emphasised by the Minister for Human Resource Development Shri P.V. Narasimha Rao at the concluding session of the two day Conference of the Central Advisory Board of Education (CABE) held in New Delhi on March 12, 1988. Shri Rao said that the Adult Education Centres and the School Health Programme have to work in an integrated manner. Such a programme of education at the Centre and in the States has to involve the Integrated Child Development Scheme, the Immunisation Campaigns, the nutritious needs of the child and the mother.

Shri Rao stressed that the setting up of Human Resource Development Ministry itself had envisaged this integrated approach and as such he proposes to convene shortly a joint meeting of CABE,Central Council of Health and authorities concerned with welfare of women and backward classes. Shri Moti Lal Vora, the Union Health Minister who was a special invitee gave the assurance that under the National Health Policy, health education is a precondition for any successful health care delivery system.

Earlier, during the preliminary session six Working Groups were set up in the fields of (1) Elementary Education (headed by Shri L.P. Shahi, Minister of State for Education & Culture); (2) Secondary Education (headed by Shri B.L. Dhritlahare, Education Minister of Madhya Pradesh); (3) Adult Education (headed by Dr. Nagendra Jha, Education Minister, Bihar); (4) Higher Education (headed by Dr Jeevaraj Alva, Higher Education Minister, Karnataka); (5) Technical Education (headed by Shri P.N. Srivastava, Member, Planning Commission); and (6) SC/ST Minorities/Physically Handicapped (headed by Shri Khurshid Ahmad, Education Minister, Haryana). These groups submitted their reports/recommendations in the afternoon session.

The Union Education Secretary, Shri Anil Bordia said that these reports would serve as further guidelines to speed up various educational programmes. Mr. Bordia said that during the last several months educational programmes have moved from general to specific details about implementation in the States. He hoped that the New Education Policy (NEP) would be implemented in right earnest from the next academic session. He further suggested that the Centre and the States should continuously monitor and evaluate the various Programmes of Action so as to simplify the procedures for effective utilisation of funds.

Some of the salient recommendations of various Groups are as under:

Elementary education

(A) The content of pre-school education should not be too academic, (B) Since creche were retaining children upto the age of six, pre-school educational activities be made a component of the creche scheme by provision of teachers, (C) State Governments should undertake detailed advance planning for primary school buildings blockwise, (D) More public contributions for school buildings would be welcome, (E) Operation Black Board and Universalisation of Elementary Education schemes be related to the construction of a system making use of public participation in a process of micro-planning, (F) Adequate appointment of women teachers is essential for girls' education, (G) Food for Education Scheme in tribal areas be extended to primary schools in SCs and STs areas and for girls, (H) coverage under Non-formal Education be increased and smaller projects be assisted by voluntary agencies, (I) The problem of sub-standard teachers and education institutions be dealt with more firmly by the States and (J) The moral content of education should receive due emphasis in the curriculum.

Higher education

(A) A National Research Foundation Council for Coordination be set up. Central Council for Rural Institute to implement various schemes be also set up, (B) Planning Boards, College Development Council be

formed, and UGC should create awareness among Universities/Colleges about various courses, (C) State Governments and Universities should give highest priority to redesigning of courses (D) Laboratories and libraries be modernised, (E) An academic calendar preferably at national level be prepared and (F) The problem of improving the examination system and women study be discussed as a separate item.

Secondary education

(A) Examination Reform system should not be allowed to be postponed. (B) Initiatives taken by the Central Board of Secondary Education (CBSE) for introducing grading and the work done by the NCERT-CBSE was noted (C) The NCERT-Council of Boards of Secondary Education (COBSE) should develop an appropriate overall design for the suggested system of examinations in a time-bound manner. (D) Three language formule be implemented sincerely upto 10th Class. No Indian classical language or foreign language should be counted under the 3 language formula. (E) COBSE and the NCERT should forthwith set up arrangements for assessing every year the standard at the end of Class X and XII in all the States and Union Territories (F) Improvement of teaching in Science and Mathematics requires better teachers' training. (G) Curriculum prepared by NCERT and COBSE should be accepted in all classes by 1990-91 and (H) State academic agencies should also develop mechanism for continuing monitoring and appraisal of various programmes. (I) In the States where women illiteracy is prevalent more girls' schools and hostel facilities for girls be provided. (J) New syllabi and textbooks should ensure that the concept of women's equality is reflected.

Technical education

(A) State Governments may set up Councils as supporting mechanisms to the All India Council for Technical Education. (B) Appropriate organisation at the level of State Directorates was strongly emphasised; and adequate funds be allocated for the Directorates. (C) More women polytechnics and women's wings in existing polytechnics for women should also be increased to at least one in each State. (D) All States should work out their needs of funds for technical education for presentation to the 9th Finance Commission well in time, and efforts should also be made for higher allocation in 1988-89.

Minorities SC/ST

(A) Increased attention be paid to the education of disadvantaged sections to promote their accelerated development.. (B) Enrolment of SC/ST in primary classes be increased with particular emphasis on girls, their retention in school and completion of their primary school education. (C) All habitations with a population of 300 (200 in tribal, hilly, desert areas) be provided a primary school. (D) More teachers from among SC/ST educated youths and women be appointed (E) Increased attention be given to the teaching of English, Science and Mathematics to enhance the learning capabilities of SC/ST students. (F) Priority be given to the special needs of children from nomadic, semi-nomadic and denotified communities. Mobile schools on the pattern of the scheme formulated by the Government of J&K for Gujjars and Bakarwal communities could be set up. (G) Guidelines be framed for the minority managed institutions/Madrasas and Maktabs. (H) Grants be given to forward looking minority managed institutions. (I) Attractive scholarships particularly to girls offering Urdu as an elective subject at all levels of education be provided. (J) Detailed survey for identification of handicapped children even in remote rural areas be undertaken and special material for teachers and handicapped children in different languages be prepared. (K) Resource centre for the handicapped children at the block level be set up. (L) A Cell be set up in the Ministry of Human Resource Development for integrated development of facilities to the handicapped children at the Centre and State level. (M) A National Commission could be set up for the Handicapped to look after all aspects of their problems and their development. (N) The widest possible use of mass media including Radio and Television be made to disseminate information on the policy and programmes benefitting SC/ST, educationally backward minorities, the handicapped and all the disadvantaged sections. and (O) A time-bound programme within a period of two years should be undertaken for effective implementation of schemes for the welfare of these sections of society.

Adult education

(A) National Literacy Mission Authority and Executive Committee should be set up at State and National level. (B) District Board of Education, District Institute of Education and Training and District Resource Unit be set up. (C) Production of standard learning material for adult learners be prepared. (D) Mass mobilisation of people is necessary for effective implementation of National Literacy Mission. Voluntary agencies/organizations/teachers/youth and ex-servicemen, prison management and housewives may also be involved. (E) The overhauling of the existing procedure needs to be taken to inspire the credibility of the governmental system. (F) Pre-service, inservice and use of electronic media was recommended (G) Producation of wall-papers in regional language be provided at resource centre. (H) A dialogue with the representatives of all main political parties be initiated for mobilisation and support to the literacy mission. (I) Traditional folk media literacy caravans should also be organised at block, district and state levels to spread the message of literacy and also to create a climate conducive to literacy. (J) The year 1988-89 should be devoted to consolidation and strengthening of the infrastructure which already exists. We should think in terms of expansion of existing number of projects and universalisation of the outreach through these projects from 1989-90 and onwards. (K) Emphasis should be on adoption of area approach for eradication of illiteracy. (L) More centres exclusively for women, SC and ST

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Diffusion of literacy in 1987

K.K. Khullar

The author, in this article, highlights various steps taken by Government in pursuance of New Education Policy 1986 to spread education among the most needy. He discusses some of the salient features of this policy and welcomes that a special care has been taken to ameliorate the lot of weaker sections of the society and to uplift the status of women through the diffusion of literacy among them.

THE NEW EDUCATION POLICY was approved by Parliament in May 1986. The Programme of Action which was prepared in the light of the New Education Policy was approved by Parliament in August 1986. The year 1987 was the year of launching of new schemes. It was also the year not only of projects' formulation but also their implementation. The scheme of free education for girls up to class XII was implemented throughout the country with massive central assistance to States. Provision for elementary education was increased (both Centre & States) from 27% of the total education outlay in 1985-86 to 34% of the total education in 1987-88. In the central sector the percentage was increased from 8.5 to 27.5 in respect of elementary education during the same period. In all, 205 Navodaya Vidyalayas (schools for talented children predominantly from rural areas) have been opened so far. Another 100 will be opened next year. The National Open University has started functioning with two Diploma Courses in Management and one in Distance Education. A new Diploma level course in creative writing will commence soon. Preparatory work for Diploma Course in Computer Education is in progress. Special programmes for women such as Pre-School Education, Child Psychology will also be started in due course. 70 Study Centres have been set up. By March 1988 the number will increase to 100. Regional Centres will be set up to supervise the study centres. During the summer vacation of 1987 five lakh teachers ere given orientation throughout the country; five lakh teachers having already been oriented in the summer vacation of 1986. Two lakhs of college students were involved, on a voluntary basis, in 1986 in the programmes of functional literacy. In the summer of 1987 about 3 lakh students participated. Six lakh literacy kits have been delivered. NCERT has evolved National core Curriculum after detailed discussion with State Governments. A large number of new schemes have been finalized such as Operation Blackboard, Non-Formal Education, Vocationalization, Establishment of District Institutes of Education and Training. Various other quality programmes are in the offing. The implementation strategies were discussed in the Conferences of State Education Secretaries and State Education Ministers in February and April, 1987 followed by a Review Meeting of the Apex Body viz Central Advisory Board of Education in June, 1987. Nine CABE Committees to watch and monitor the progress of implementation have been set up in various sectors of education viz. elementary education, content and process of education, housing facilities for women teachers, transfer of teachers, vocationalization, Scheduled Castes, Scheduled Tribes and other educationally deprived groups, management of education, common school system, development of languages. Most of these Committees are likely to complete their work by early 1988 when the next meeting of the CABE is likely to be held.

Non-formal education

The New Education Policy has given the highest priority to the Non-Formal Sector realizing that the formal system cannot undertake the heavy burden of

the task of universalization and retention of drop-outs. The NFE scheme was started in 1979 and was confined to nine educationally backward States, viz. Assam, Bihar, J&K, UP., Rajasthan, West Bengal, Madhya Pradesh, Andhra Pradesh and Orissa. It must be remembered that educational backwardness has nothing to do with ratio of literacy. These are those States where more than 75% of the unenrolled children are found. Since the capacity of the formal system is limited there is no choice but to adopt the non-formal education strategy. Arunachal Pradesh is the tenth State which has now been recongnized as an educationally backward State. The scheme of the non-formal centres, therefore, has been in operation for the last eight years and at present there are about 2 lakhs of centres in the country.

In the light of the NEP requirements the whole scheme has been revised in which States other than the 10 States named above also qualify. In the remaining States NFE centres on 50:50 financial assistance pattern and 90:10 pattern exclusively for girls centres, can be opened in tribal areas, desert area, hilly areas and in urban slums for working children. As per the policy voluntary agencies and Panchayati Raj institutions are being involved to run the centres. For voluntary agencies the assistance is 100%.Procedures have been made easy, disbursement of grant is speedy. The main characteristics of the new scheme is that the entire learning material is relevant and need based. The success of the new scheme will largely determine the nation's efforts on out-of school children. In the formal education it is the child who goes to the school while in the non-formal education it is the school which goes to the child. Many innovative projects under this schemes are under consideration.

Operation Blackboard

This is a new scheme to provide minimum essential facilities in primary schools. The scheme is confined to formal schools. The facilities include:

(1) Two reasonably large rooms which can withstand the vagaries of weather.
(2) Blackboard, duster, maps, charts other learning material.
(3) Toys and games.
(4) Teacher's Guides.
(5) A woman teacher where second teacher is to be appointed.

It has been decided that 20% of the C.D. blocks, municipal wards will be covered by Operation Blackboard in the current year, 30% next year and 50 in the third year It has been ensured that in the selection of blocks the criteria of backwardness is maintained. The priority should go to blocks with concentration of population of SC/ST, minorities and other weaker sections.

Adult education

A massive programme called National Literacy Mission has been finalized. Post-literacy programmes and continuing education has been ensured through Jan Shikshan Nilayams. The scheme of Shramik Vidyapeethas has been reviewed. The mass programme of RFLP/RURAL Functional Literacy Programmes was launched with the participation of about 5 lakhs of adult learners on voluntary basis. Prgrammes for women have been given priority. Since this is a part of the New 20-Point Programme it has to be implemented in a time-bound schedule. This is in addition to the programmes of the State Governments under the State Plans.

Women's education

The New Education Policy envisages that education will be used as an agent of basic change in the status of women. In order to neutralize the accumulated distortions of the past, there will be a well-conceived edge in favour of women. There shall be studies for the empowerment of women.

According to 1981 Census the male literacy in India is about 47% while the female literacy is less than 25%. Effective literacy is much lower The effective level of education in India is not more than 15% of the total population. The extent of drop-outs among girls is alarming. Of every 10 girls who enroll themselves in primary schools, less than 2 are able to complete elementary schooling upto Class VIII According to recent estimates 1 4 crores of children are engaged in wage labour Another three crores are engaged in econmic activity as unpaid family labour This group makes up two-thirds of the children out of school and the majority of them are girls. Traditional caste and other community-wise disabilities still persist in the country which affect women still adversely. In fact India's problem of illiteracy is rooted in female illiteracy. This is militating against the country's advancement and preventing the realization of the constitutional commitments. It is also a serious obstacle in limiting the rate of population which is so closely linked with female illiteracy. The problem, therefore, has to be tackled as a short term and a long term programme.

A Project entitled "Education for Women's Equality" based on National Policy on Education and Programme of Action to be implemented in ten selected districts in the next year and ten districts thereafter has been formulated. The Project has been worked out in consultation with the State Government concerned, academics interested in women's issues and women development workers. The main features of the Project are as under:—

(i) The participation of girls at the elementary stage can be substantially enhanced by provision of support services, provision of local women teacher support services, provision of local women teachers and effective non-formal education pro-

grammes. This project will take responsibility for ECCE and supplementation of the inputs of other Departments.

(ii) A literacy centre is envisaged essentially as a place for education, recreation and the form for an understanding of the process of development to enable women to actively participate in it. The State Resource Centres will be asked to develop special learning materials for these adult education centres.

(iii) Special vocational and pre-vocational programmes will be introduced in all girls secondary and higher secondary schools. These courses will be related to the work opportunities in the region. It is expected that four vocational courses will be introduced in each school and such courses will be introduced in 50 secondary higher secondary schools. A variety of part-time/non-formal vocational courses will also be organized.

(iv) Institutions of Social Science Research and of higher education will be encouraged to take up programmes of women's studies, research, training and extension. These institutions would also involve their students in undertaking evaluation of various programmes taken up under this project.

(v) District Institutes of Education (DIETs) will be required to subserve to the objective of the Project, namely, be an instrument for women's empowerment

(vi) In the Project Districts there will be strong wing on women's education Academics interested in women's development and women activists will have dominant say in this wing. The programmes meant for women's development will be closely monitored and arrangements provided for introduction of mid-term correctives

The life of the Project is envisaged as four years, extendable by another four years after evaluation.

NCERT has already prepared example material for women's equality curricula. Besides in the massive programme of women teachers' training there are special modules on women's equality. Textbooks are being reviewed to remove the resists and bias.

National testing service

Closely linked with the delinking of jobs from the degrees is the establishment of national testing service, in phases, on voluntary basis to determine the suitability of candidates for specified jobs and to pave the way for the emergence of norms of comparable competence across the nation. The primary use of such tests will be to allow people whether they have formal degrees or not, to demonstrate that they have the proficiency to qualify for a variety of jobs that have been traditionally limited to graduates. Such a test can also help those in employment to qualify for promotion. Educational Consultants (Ltd), a Govt. of India Undertaking, is preparing a Project Report in this regard. N.T.S. will also offer its assistance in areas where there are no recruitment tests such as experts, specialists, resource persons. The 'Project Report' for establishment of rural institutes and univerities has been prepared.

In June 1987 the Government announced the new salary structures for university and college teachers as one of the steps to improve the quality of education. For the orientation of newly appointed teachers U.G.C. is launching a scheme of teachers' training. Academic staff colleges will be established in universities. Programmes for research and development have also been strengthened.

Striding towards development

In the field of technical education a major development has been the passing of the Bill to vest AICTE (All India Council for Technical Education) with statutory powers in December 1987. It is expected that the mushroom growth of technical institutes and capitation fee institutes will be checked. Steps have also been taken to remove obsolesence in machinery and equipment from the engineering and technological institutions and new laboratories will be set up. All on-going programmes have been reviewed and reoriented. Four residential polytechnics for women will be set up in the next two years. A University and an IIT in Assam will be set up under Assam Accord. In Punjab it is proposed to set up Longowal Institute of Engineering and Technology for which all preparatory work has been done

To prompte development of technical education and maintain its standard through a coordinated and integrated approach and the determination and maintenance of standards of technical education is the continuing responsibility of the Central Government, although education became a concurrent subject in 1976 as a result of 42nd Amendment of the Constitution of India.

Largely through the efforts of AICTE, an extensive infrastructure in terms of facilities of technical education has been created in the country over the successive plan periods. Today the system has annual admission capacity of 30, 000 at Degree level, 60,000 at Diploma level and 6,000 at Post-graduate level of courses in engineering/technology covering a wide spectrum of engineering and technological disciplines, including facilities for research. The supporting services, Faculty development, curriculum development have been provided to improve the quality of technical education.

Over the years, five Indian Institutes of Technology as institutes of national importance have been set up at Kharagpur, Kanpur, Madras, Bombay and New Delhi to produce high quality Engineering graduates and Post-graduates, to undertake research and promote indigenous technology development. In the field of Management Education, three national level Institutions-the Indian Institutes of Management have been set up

at Calcutta, Ahmedabad and Bangalore. The fourth one at Lucknow has been established in recent time.. A National Institute of Foundry and Forge Technology has been set up at Ranchi to provide specialised education and training in the field of Foundry and Forge Technology. National Institute for Training in Industrial Engineering at Bombay; School of Planning and Architecture in Delhi as a premier institution in architecture and regional planning; 15 Regional Engineering Colleges as joint ventures of the Centre and States in 15 States as the second best category of Engineering Colleges near only to IITs have also been established to improve the quality of Polytechnic education in the country.

The creation of the facilities of technical education, establishment of technical institutions, expansion of admission capacities, introducation of new courses were all related to the manpower demand and supply. Upto the end of the third Five Year Plan the expansion was allowed to take place and from the Fourth Plan admission capacity was stabilized round about 25,000 at Degree level and 50,000 at the Diploma level and the numbers were considered to be adequate to meet the demands of the economy and over production was considered to lead to unemployment of engineering graduates and diploma holders. In the Fifth Plan the emphasis was shifted to quality.

The New Education Policy (1986) envisages that technical education and management education be viewed together because of their close relationship and complementary concerns.

The infrastructure and services sectors as well as the unorganized rural sector also need a greater induction of improved technologies and a supply of technical and managerial manpower. In order to improve the situation regarding manpower information, the recently set up Technical Manpower Information System will be further developed and strengthened. Continuing education, covering established as well as emerging technologies, will be promoted. As computers have become important and ubiquitous tools, a minimal exposure to computers and a training in their use will form part of professional education. Programmes of computer literacy will be organized on wide scale from the school stage.

Distance learning

The Policy further states that in view of the present rigid entry requirements to formal courses restricting the access education, programmes through a distance-learning process, including use of the mass media, will be offered. Technical and management education programmes, including education in polytechnics, will also be on a flexible modular pattern based on credits, with provision for multi-point entry. A strong guidance and counselling service will be provided. Appropriate formal and non-formal programmes of technical education will be devised for the benefit of women, the economically and socially weaker sections, and the physically handicapped. The emphasis on vocational education and its expansion will need a large number of teachers and professionals in vocational education, educational technology, curriculum development etc. Programmes will be started to meet this demand. To encourage students to consider "self-employment" as a career option, training in entrepreneurship will be provided in degree or diploma programmes. In order to meet the continuing needs of updating curriculum, renewal should systematically phase out obsolescence and introduce new technologies or disciplines. Some polytechnics in the rural areas have started training weaker groups in those areas for productive occupations through a system of community polytechnics.

The National Policy on Education and the Programme of Action for implementation of the Policy have widened the dimensions of the objective and goals of technical education for which a larger financial outlay is needed to make a meaningful impact.

However a serious situation has arisen in the recent past because of mushroom growth of private capitation fee engineering colleges and polytechnics. This is a serious threat to the maintenance of standards of technical education and it is also leading to the production of a very large number of substandard engineers and diploma-holders out of proportion to the number required to meet the needs of the country. The Government is taking adequate regulatory measures in this regard.

Vocationalization

The New Education Policy (1986) proposes that vocational courses cover 10% of higher secondary students by 1990 and 25% by 1995. Steps will be taken to see that a substantial majority of the products of vocational courses are employed or become self-employed. Review of the courses offered would be regularly undertaken. Government will also review its recruitment policy to encourage diversification at the secondary level. The role of central sector in vocationalization has been universally accepted.

The unorganized sector, however, which absorbs the bulk of the work force has remained without any formal training or proper employment. Consequently one witnesses the phenomenon of mounting unemployment among the educated at the one end and shortage of plumbers, mechanics. electricians, carpenters and manpower in numerous other trades at the other end.

According to the Programme of Action (1986) brought out by the Ministry of Human Resource Development about 80% student population do not go beyond class 10. The drop-outs upto and inclusive of class 8 are 120 lakh per year. Roughly 20 lakhs boys and girls cross class 8 but do not get beyond class 10. All of them form a large unskilled pool of labour force. They need opportunities of training in some skills either in their traditional occupations or in new areas to take up skilled and gainful occupations. In addition there is a backlog of school drop-outs who have crossed school age and are working as semi-skilled and skilled workers. The total labour force in the country in the age group 15-

59, according to the POA (1986), consists of all these groups and is of the order of 23.70 crores (March 1980). Of this only about 10% is in the organized sector. The remaining are either employed without training, partially employed or unemployed. There has not been any planned educational programmes for this large segment of population. The tribal and the rural population have also not much access to vocational courses. There is also paucity of courses to cater to the women population whose earning capacity could be improved considerably through vocational courses. The disabled and the handicapped is yet another sector which can benefit from vocational training. The scheme of community polytechnics will also be expanded. The Programme of Action further recommends that selected engineering colleges, polytechnics, ITI and other vocational and technical training schools will engage themselves in conducting part-time vocational courses for the benefit of special groups and those already employed. Special vocational training institutes for women tribals and other weaker sections of society to meet identified needs will be established by the State Departments of vocational education. Centres for vocational training for the handicapped will be set up with instructions of relevant and useful technology. For teachers, principals and key personnel engaged in vocational education, there shall be a programme of regular training in a phased manner. Industry will be fully involved in the programme and so shall be the community. Linkages will be developed amongst all those who are engaged in the programmes of vocational education viz. schools, employers, voluntary organizations and the community. Some State Governments such as Tamil Nadu, Madhya Pradesh and Andhra Pradesh have already introduced some innovative schemes in the field of vocationalization. The earn while you learn' scheme in Madhya Pradesh, chalk making through adult education in Haryana, and mushroom cultivation and making of shawls, country fans and bed-sheets in the adult education centres in J & K are some of the income generating schemes which have attracted notice.

To quote from the New Education Policy:
"The future shape of education in India is too complex to envision with precision. Yet given our tradition which has almost always put a high premium on intellectual and spiritual attainment, we are bound to succeed in achieving our objectives".

For weaker sections remedial coaching of college and university level has been provided by U.G.C. The rate of post-matric scholarships for children whose parents are engaged in unclean occupations have been increased from Rs. 145 to Rs.200 per month. Ten community polytechnics have been located in minority concentration areas.

Budgetary provision

The budget provision for the education in the central sector has been increased in the current year to Rs. 800 crores while the last year's provision was Rs. 352 crores. Likewise the provision for education in the State sector has also increased from Rs. 836.30 crores in 1986-87 to Rs. 1013.53 crores in 1987-88. This has facilitated the easy and the quick implementation of the new schemes.

(Contd from page 13)

should be opened where the percentage of their enrolment is very low, and it should be manned by women instructors by adopting special selections procedures. (M) Adult literacy centre could be utilized as a very good forum for communication and dissemination of information on matters pertaining to immunisation, child care, health, hygiene and sanitation etc. (N) Organise small functions related to development activities fairs, festivals through the adult literacy centres for interaction with the functionaries.

The Minister for Health & Family Welfare, Shri Motilal Vora, the Minister of State for Education and Culture, Shri L.P. Shahi the Minister of State for Welfare, Dr. Rajendra Kumari Bajpai and several Members of Parliament, State Education Ministers, State Education Secretaries, Members of Planning Commission and University Grants Commission as also eminent educationists and scholars participated in the two-day deliberations of the CABE □ □

(Courtesy: PIB New Delhi)

Better marketing facilities for tribals stressed

The first meeting of the Tribal Cooperative Marketing Development Federation of India was held in New Delhi on February 23, 1988. TRIFED is an apex body at the national level established to assist in developing marketing facilities and realisation of better prices for the tribals.

Addressing the meeting, the Welfare Minister, Mrs. Rajendra Kumari Bajpai underlined the need to give priority to protecting tribals from exploitation. She said that Minor Forest Produce items had potential to bring about an economic revolution for the tribals and rural people. TRIFED would work to strengthen the infrastructure of the Large Area Multi-Purpose Cooperative Societies (LAMPS) to develop marketing facilities for the tribals. She hoped that the State Governments would cooperate in this endeavour.

The Minister said that the Government had initiated a study to assess the potential and marketing arrangements for six important items of Minor Forest Produce, namely, tussar cocoons, tamarind, sal seed, myrobalan, lac and gum karya. She assured full support of the Government in ensuring fair prices for the tribals. She said that such strategies would help to eliminate middlemen and reduce the role of private traders in marketing tribal produce. □

Spotlight on education

Making 'each one teach one' Scheme a success.

Dr. Anupama Shah, Ms. Uma Joshi
& Ms. Manisha Pande

The experimental literacy scheme 'each one teach one' launched with the aim of accelerating literacy among illiterates has not been a great success. In this article the author analyses the scheme, evaluates its performance and winds up suggesting means for better results. The scheme can truly work only if the sense of social service, sympathy and respect for the cause are inculcated in the instructors, feels the author.

ELIMINATION OF ILLITERACY has been one of the major concerns of our Government since Independence. Gandhiji in the year 1939 stated "Illiteracy is a sin, a blackmark for India and must be eradicated" With four decades of freedom, it has not been possible to eliminate illiteracy which in turn is the underlying cause of other problems faced by the country such as severe poverty, unemployment, population growth, unhygienic conditions, exploitation and superstitions.

Although the percentage of literacy has increased from 1951 which was 16.67% to 36.27% in 1981, simultaneously the population has also increased from 300 million to 437 million. On an average, the rate of illiteracy in our country is 63.7 per cent although it is believed that it will come down to 50 per cent by the end of this century. According to the statistical reports, one-forth of illiterate people in the world are in India.

Adult literacy

Adult literacy has received special attention during the last ten years. A significant step was the launching of National Adult Education programme on October 2nd 1987, with the uphill task of covering ten crore illiterates in the age group 15 to 35 years within a period of five years although it was only possible to cover 2 to 3 crores during the scheduled period. In the sixth five year plan the Adult Education Programme formed part of the minimum needs programme and the plan document envisages a very ambitious target of complete removal of adult illiteracy in the age group up of 15-35 years by 1990.

Several approaches have been planned and implemented to meet the ambition task laid before the country. Since Government alone cannot meet the challenge, the new 20 point programme envisaged large involvement of students and voluntary agencies in the programme of removal of illiteracy.

The University Grants Commission has decided to actively involve the Universities and Colleges all over the country in the Adult Education Programmes. One of the schemes of eradicating illiteracy in which the students could participate actively is the 'Each one Teach one' scheme, the objectives of which are as follows:

(a) Secure effective participation of students in the project of eradication of illiteracy.
(b) Enrich higher education by integrating field experiences.
(c) Sensitize students to social realities.

Now, there is, a suggestion to introduce a scheme called "Each one Teach one family." It becomes necessary to check whether it is possible for each one to teach one illiterate and make them literate within a limited span of time as then only one can think of teaching a whole family.

Therefore, the Department of Home Science Education and Extension under its Pragati Non-formal Education Centre, took up the 'Each one teach one' scheme of literacy as an experiment.

Description of the experiment

The 'Each one teach one' scheme runs paralled to the College programme. It covers altogether seven months where the instructor has to take up the classes for two hours a day or at least four days a week making the total of 225 hours.

The Department of Home Science Education and Extension, Faculty of Home Science, Baroda also decided to implement the 'Each one teach one' scheme through third year B.Sc. (Major) students, as part of the course work in the subjects Non-formal education for youth and children and Adult Education.

The Department of Adult and Continuing Education, M.S. University of Baroda, which is implementing the 'Each one teach one' scheme in Baroda District was contacted and the required information to implement the scheme was obtained.

Each student was then asked to identify one learner keeping in mind the following criteria:

(a) Learners should be in the age group of 15 to 35 years.
(b) Learners should be non school going.
(c) Learners should be illiterate, that is not knowing how to read and write.

After the learners were identified, the students were asked to bring them to the college where each learner was introduced to the course techers and when the teachers were convinced of these learners fulfilling the required criteria, the final list was prepared of the students with their respective learners. This list was sent to the Department of Adult and Continuing Education after fifteen days of which the educational kit for each learner was availed. The educational kit comprised of the following materials·

(a) Letter recognition lessons.
(b) Mathematical lessons.
(c) Teachers guide
(d) Information guide for teachers and learners.
(e) Evaluation sheet O
(e) Evaluation sheet I
(f) Evaluation sheet II
(g) Supplementary lessons which learners could continue to learn if they wish to.
(f) Four postcards with printed address, two to be sent before starting the lesson and two after completing the lessons to the required authorities.

The students and the course teachers were oriented to the kit by the lecturers of the Department of Adult and Continuing Education and were demonstrated the use of the kit. Thus the necessary information on the use of the kit and know how of the 'Each one teach one' scheme was obtained.

After completion of twelve lessons the first test was administered and the learners were asked to come to the College to give the test. After the completion of all the lessons the Evaluation Sheet II was used to administer the second and final test when again the learners had to come to the College to give the test.

Initially twenty two learners were enrolled. At the time of first test there was one drop out and at the time of the final test there were total three drop outs making the total of nineteen learners.

After the final test, the reguired postcards indicating the completion of the lessons were sent to the required authorities

Findings and discussion

The performance of the learners in 'Each one teach one' test reflected that forty percent of the learners failed and the remaining sixty percent were distributed in the Ist, IInd and IIIrd Division.

Among the three sections of oral, written and numericals, the learners performed poorly in oral where fifty percent that is half of the learners failed but they were found performing well in written where forty five percent scored first division.

It is important to point out that it was very difficult for the learners to follow the test papers. They had to be aided greatly by the instructors throughout by detailed

Table

Percentage distribution of learners in 'Each one teach one' scheme of literacy according to their performance

Performance of Learners	*Oral* f	%	*Written* f	%	*Numericals* f	%	*Total* f	%
Ist Division (60% onwards)	—	—	9	45	6	30	6	30
IInd Division (48% to 59%)	4	20	4	20	4	20	3	15
IIIrd Division (35% to 47%)	6	30	3	15	3	15	3	15
Fail (Below 35%)	10	50	4	20	7	35	8	40

The performance of the learners in 'Each one teach one'

d repeated explanation to make them understand iat they were required to answer.

The entire question paper was written and explained the blackboard as it was and in addition to this, with dividual guidance only, the learners were able to swer the test papers.

Thus it can be stated that without this help given, ere would have been an immensely low level of rformance by the learners.

So the attempt to make each illiterate, a literate mpletely through 'Each one teach one' scheme was t quite achieved.

Several reasons can be attributed to this lack of ccess.

The problems

During the implementation of the 'Each one teach ie' scheme, several sessions of discussion regarding e progress of the learners with regard to the scheme ok place between the student instructors and the achers in charge and repeatedly several problems ere reported by the Student Instructors :—

(a) Lack of motivation among the learners was a grave problem faced by the student instructors. Inspite of their repeated request, the learners were reluctant to come for the class even when the student instructors went to their place. When they did come it seemed that they were obliging the instructors as they were aware that it was a part of the course work for the student instructors.
(b) The mutual timings was another problem. The student instructors could only take out time after their college timings and academic work when the learners were busy with the house hold work. Therefore irregularity was commonly found among most of the learners.
(c) Irregularity on part of the learners can be attributed to the lack of co-operation between the family members of the learners who were not willing to share the house hold work with them and did not let them go for the classes
(d) Other problems were that some learners felt that they were too old to attend the classes and felt that they would not be able to pay the required attention to their studies. They were also not able to give due respect to the student instructors due to the age bar.

These observations regarding the problems can be ipported by some studies done in this area.

Thakur (1986) in her study on problems and job tisfaction of Adult literacy teachers of Dabhoi Taluka Baroda District also found that adult literacy achers always faced problems in motivating the adult arners. They also found problems of mutual timings id of teaching and evaluating adult learners.

Sharma conducted a study to find out the difficulties ced by the teachers of adult literacy classes of Patiala District of Punjab and found problems like nonavailability of suitable place, non-cooperation among villagers and irregularity of learners.

Lakshmi (1987) conducted study to find out the problems faced by the Instructors of 'Each one teach one scheme' in the District of Baroda and found that two-third of the instructors faced problems regarding motivation and among motivational problems learners demanding incentives were reported by highest percentage of respondents. Other problems were like irregularity among the learners, mutual timings, learners feeling too old to learn and not giving due respect to their instructors.

Suggestions

Keeping the above discussion in mind certain observations can be made regarding the 'Each one teach one scheme'.

Each one teach one scheme cannot depend much on the students alone as they have constant tension of submissions and examinations. If the scheme treats literacy study on adhoc basis, then the gain is not likely to be substantial. It is suggested that there should be continuous literacy programmes with full time adult literacy teachers.

Inspite of supervision, guidance and motivation, the achievement was poor among the learners. One is justified to think whether this scheme is working else where and how much time literacy gain must be registering with other volunteers where no such provisions for supervision and monitoring are provided.

There should be ways to check the literacy gain as just sending the postcards to the authorities indicating that the learner has completed the lessons and become literate is not sufficient. This way only on record the number of literate will increase and in reality there would not be much progress as desired.

This scheme can truly work if the sense of social service, sympathy and respect for the cause are actually inculcated in all the literacy instructors, whether they are students, personnels or volunteers. If such values are not inculcated all efforts will be in vain exceptions are always there but their number is insignificant to the cause.

Till then all efforts should be made to enroll all children (boys and girls) in formal schools where actual literacy gain can be seen and extra care need to be taken to minimize the drop out rate. ☐☐

Tenu-Bokaro link canal hydro electric project cleared

The Planning Commission has approved Tenu-Bokaro Canal Hydro Electric Project for inclusion in the Seventh Five Year Plan, 1985-90 of Bihar State. The 1 MW capacity hydro electric project is estimated to cost Rs. 275.5 lakh including Rs. 8.5 lakh towards the cost of transmission lines.

The project envisages to the utilise the water release from existing Tenughat Dam across river Damodar in Giridih District of Bihar. The project would yield annual energy of 7.98 Gwh in a dependable year.

Correcting educational imbalance of North-Eastern region

Roohi Aijaz

The author here discusses the problems and progress of educational development in the North-Eastern region. The main constraints in the development of education there, according to her, are scattered and sparsely populated villages, heterogeneous demographic composition, low per capita income and absence of satisfactory infrasctructure. She discusses these drawbacks area-wise and suggests steps that need to be taken to set right the educational imbalance of the region.

EDUCATION HAD ALWAYS BEEN ACCORDED an honoured place in Indian society. It is the most powerful instrument for achieving socio-economic change, development, national progress and security. It was only after Independence that the Govt. forcussed its attention on the educational development. In this regard, special mention may be made of Article 45 and 46 of the Constitution. Article 45 of the constitution directs that "the state shall endeavour to provide within a period of ten years from the commencement of the constitution for free and compulsory education for all children until they complete the age of 14 years." This is followed by Article 46 which provides that, "the state shall promote with special care the educational and economic interests of the weaker sections of the people, in particular, of the scheduled castes and scheduled tribes and shall protect them from social injustice and all forms of exploitation"

Objective

In order to ascertain whether the educational imbalances have widened or narrowed down over the span of the last 30 years, the data for the years 1961-71-81 for general, scheduled castes and scheduled tribes education have been analysed and compared.

The main purpose of this paper is to study the progress and problems of educational development in the North Eastern states. These states have specially been selected because of their special features namely (a) scattered and sparsely populated hamlets; (b) heterogeneous demographic composition comprising of different tribal groups which pose difficulties for adopting a single common medium of instruction. Besides, low per capita income, absence of satisfactory infrastructure like roads and communication had adversely affected the development of education.

Imbalance, why and how

In 1961 the all India literacy rate was 24 against 10.27 for scheduled castes and 8.54 for scheduled tribes only. The all India literacy rate has gone upto 29.45 in 1971 and up to 36.23 in 1981. Similarly, scheduled caste literacy has gone up to 14.67 in 1971 and up to 21.38 in 1981. Scheduled Tribe literacy rate has also increased from 11.30 in 1971 to 16.35 in 1981.

However, in Assam, the increase in the general literacy rate was only marginal, ie., it went up from 27.4 in 1961 to 28.72 in 1971. Similarly, there was slow progress in scheduled castes and scheduled tribes literacy rates. It has risen from 24.4 to 25.79 and 23.58 to 26.03 for scheduled castes and scheduled tribes during the same decade.

In Meghalaya, general literacy rate increased from 29.49 during 1971 to 34.08 in 1981. While scheduled

caste literacy rate increased from 20.38 to 25.78 only during the same period. Though literacy rate for scheduled castes and scheduled tribes has increased during the decade but it is not at par with the general literacy rate.

The other north-eastern states have improved their literacy rates considerably during the decades of 1961-71 and 1971-81.

In Nagaland the literacy rate increased from 17.9 to 42.57 during 1961 to 1981, whereas increase in literacy rate among tribes was from 14.76 to 40.31. Similarly, in Tripura general literacy rate increased from 20.2 in 1961 to 42.12 in 1981. Whereas scheduled castes from 20.2 in 1961 to 42.12 in 1981. Whereas scheduled castes literacy rate improved from 13.42 to 33.89 and scheduled tribes from 10.01 to 23.07.

In all the north-eastern states though the general literacy rate is almost at par with all India average, the female literacy rate lagged far behind that of males. In Assam male literacy rate was 36.68 whereas female literacy rate was only 18.63 in 1971. In Manipur against the literacy rate of 46.04 for male, female literacy rate was only 19.53 in 1971 and 26.06 against 53.29 of male in 1981. In Nagaland literacy rate for males was 35.02 and for females was 18.65 in 1971 which increased to 50.06 for males and 33.89 for females in 1981. The female literacy rate is lowest in Arunachal Pradesh which was 3.71 against 17.82 for males in 1971 and 11.32 against 28.94 in 1981.

Similarly, scheduled castes and scheduled tribes females also have very low literacy levels as compared to males. Some of the states where female literacy rate is considerably lower than males are Assam, Manipur, Nagaland, Tripura, Arunachal Pradesh. The N.E. Region is known for its cultural diversity and special identity. There are several tribal communities who have their own individual cultural pattern. An examination of the group wise literacy figures would reveal that the rate of spread of literacy amongst different tribal groups varies considerably. Some tribal groups advanced more in the field of education namely, Hmar, Mizos of Assam, Monsang Moyan, Ralte, Sahte of Manipur. Hmar, mikir, Mozo, Synteng of Meghalaya, Lushai of Tripura, Haisa, Tangra, Liju Nocto, Longchang, Tangsa, Thai Khampti of Arunachal Pradesh. Whereas some tribes have very low levels of literacy. Tribes with literacy rate below 5 per cent are Pans of Meghalaya, Munda of Tripura, Nishang, Pasi, Pontha, Nocte, Sulung, Tagin of Arunachal Pradesh. The female tribal literacy rate of these group is almost negligible.

This may be due to the reason that in north eastern states, most of the institutions have been established without proper long term planning for the location in relation to the population density and prioritisation of the needy areas. There is insufficient dovetailing of efforts of the state Governments with those of private agencies which have opened new schools. Hence, inspite of large number of schools, there are still habitations without schooling facilities on the one hand and economically unviable student enrolments on the other in many of the existing schools.

Surprisingly, education has not reached evenly to all the subcastes among scheduled castes and tribes in different areas of states. There has been a sharp reduction in the coefficient of equality with every higher stage of education, though it improves in vocational courses. Wastage and stagnation are very much higher in the case of scheduled castes and scheduled tribes.

The high incidence of wastage, perticularly at the primary stage i.e. 70.7 per cent in Assam, 77.6 per cent in Nagaland and 70.4 Manipur, 83.4 per cent in Meghalaya, 70.2 per cent in Nagaland and 70.4 per cent in Tripura, 82.4 per cent in Arunachal Pradesh and 68.3 per cent in Mizoram in 1978-79. is due to poor quality of teachers. The education system in the region suffers from the malady of untrained and under qualified teachers. The percentage of untrained teachers in primary stage ranges from 30 to 60 among the states in the NE Region compared to the all India average of 12.

Secondly, the general draw back of the educational system in the region is that it has failed to make any contribution to skill training among the pupils to support the socio-economic development of the region. Besides, due to the uneven scatter of the habitats with small communities, it may not be possible to provide the primary school infrastructure with in the reach of all communities. This has also contributed for the low level of retention.

During the decades of 1961-71 and 1971-81, adequate attention was not given towards the divertification of vocational courses, with the result that large number of students dropped out of the school system at different levels. Therefore the avenues for diversified vocational training were very limited. Hence, a large number of them pursue higher education. One redeeming feature is that a large proportion of scheduled caste students go to vocational courses than other groups.

Do this to set it right

The main causes for dropout from schools are inadequate number of schools in some habitats, abhorrence of the orthodox and illiterate parents to send their children especially girls to the school, non suitability of syllabus, poor transport facilities, non availabitity of trained teachers and poverty of parents. In order to promote the educational level and reduce the dropout rates, it is very essential to identify these basic flaws at the regional level and provide basic infrastructural facilities. The socio-economic situation calls for a better accessibities. The socio-economic situation calls for a better accessibitity of educational facilities to girls, by reducing distances of schools from village habitations, expanding non formal elementary education, adult education and open schools. Appointment of lady teachers in schools would help in enabling them to attend schools while their younger siblings are taken

care of. Provision of incentives like mid-day meals, better rates of scholarships, freeships etc. would also go a long way in preventing dropout. Better health facilties may also go a long way in preventing dropout. Better health facilties may also help for better enrolment in the schools. Inputs from other sectors are equally important, e.g. an overall coordination of health, employment welfare and education is essential.

Vocationalisation has received a very high priority in the New National Policy of Education 1986. It is proposed to cover 10 percent of higher secondary students with vocational courses by 1990 and 25 percent by 1995. At present the coverage is only 2.5 percent. This policy will therfore likely to make the education more relevant to local needs if the courses are suitably designed.

To combat the problem of poverty, non-formal and vocational skills are being expanded in the New National Policy of education so as to provide larger avenues for self employment.

What more needs to be done

Though there has been a steady improvement in the enrolment ratio during the decades of 1961-71 and 1971 81, we are far from our objective of achieving universalisation of elementary education. In the case of males it may be possible to achieve 100 percent universalistion but as regards females the rate is far behind the goal on account of various socio-economic constraints. Thus, the goal of universatisation of compulsory enrolment of all children in the age group 6-14 is not achieveable in the near future due to rganisational, infrastructural and socio cultural factors. It may be necessary to adopt an area and group based concerted approach. The backward classes, scheduled tribes and other bachward classes and population in the backward regions are not likely to fully enroll the children for a long time to come.

In order to achieve the goal of universalisation at elementary stage, it is important to set up new institution in relation to the population density. It is also important to provide the primary school infrastructure within the reach of uneven and scattered habitats. Special efforts will have to be made to increase the enrolment of girls especially those from weaker sections. ☐

Research for welfare of mentally retarded

The country today has 286 special schools and centres for the mentally retarded, 61 of them being in Karnataka, followed by 51 in Maharashtra and 36 in Kerala. According to a survey of the voluntary organisations working for the mentally retarded, undertaken for the first time by the National Institute for Mentally Handicapped (NIMH), Secunderabad, there was a phenomenal growth of such institutions during the decade 1977-86, when 164 new institutions came up as against only 65 during the preceding decade, i.e. 1967-76.

There are approximately 3,200 professionals in the field of mental retardation, of whom about 1,000 are special educators and the rest being psychologists, medical personnel, field pathologists and audiologists, social workers, physiotherapists and occupational therapists etc.

Besides conducting this survey NIMH, the youngest in the chain of the four national institutes (founded in February 1984) established by Ministry of Welfare, it is also undertaking three research projects in the field of mental retardation, which on completion in May 1988 will give a big boost to such services in the country.

At a rough estimate, of the 68.5 crore population of the country (1981 census) two percent are suffering from mental retardation, most of which reside in rural areas of the country.

Water Act to be amended to control pollution

The Water (Prevention and Control of Pollution) Act 1974 is being amended on the pattern of amendments made in the Air (Prevention and Control of Pollution) Act 1981 to confer more powers to the State Governments to Control Pollution and to impose stringent penalties on the defaulters. Though a number of legal and administrative actions had been taken for prevention and control of industrial pollution the primary responsibility for pollution control was with the industries themselves. They had to take necassary pollution control measures in their installations so as to meet the social as well as the legal obligations.

Boost to agro-based paper industry

The Government has extended certain relief and concessions to the paper industry in order to promote the use of non-conventional raw materials such as agricultural residues, wastes and bagasse. The Minister of State for Inustrial Development, Shri M. Arunachalam told the Lok Sabha on February 23, 1988 that the paper containing not less than 75% by weight of pulp made from bagasses was exempted from excise duty and the paper and paper board manufactured with not less than 50% by weight of pulp made from non-conventional raw materials were charged excise duty at concessional rates.

Narmada Multipurpose Project : Boon or bane

I. Udaya Bhaskara Reddy

A large number of Irrigation Projects have been initiated in our country, which have became a symbol of national development. The recently cleared Narmada Vally Project, perhaps the largest and most ambitious project in our country is acclaimed as a boon to the States of Madhya Pradesh, Gujarat and Maharastra. However, according to auther the project besides inducing significant benefits, will also cause large scale social and economic disasters which will affect the traditional way of life of displaced as well as other local inhabitants. He, therefore, attempts to highlight the various benefits as well as adverse effects of the project.

IN A COUNTRY LIKE OURS, where agriculture being the economic base, initiation of irrigation and multipurpose river valley projects play a vital link in the overall development of the country. The process of socio-economic development initiated under successive five year plans had given scope for the implementation of various major, medium and minor irrigation and hydro-electrical projects in different parts of our country. These projects have both direct and indirect benefits as well as colossal damages. These projects have induced several benefits like creating additional irrigation facilities, increasing productivity, power generation, providing employment opportunities, infrastructure development, increase availability of water for industrial and domestic use, etc. On the other hand these projects have caused widespread displacement, besides submerging vast tracts of agriculture and forest lands, widespread waterologging, soil erosion, etc. The construction of large dams are today India's most controversial environmental issues. They key factor is not nature but human beings. The worst affected are tribals, scheduled castes, landless labourers depending on agriculture, forest and associated activities, marginal farmers and powerless poorer sections of society.

The Narmada Sagar and Sardar Sarover multipurpose river valley project, which was subjected to long delays for various reasons over the years has been finally cleared by the Union Government recently. The project is considered to be the largest and most ambitious river valley projects in our country. The Narmade river has a vast catchment area of 98, 796 sq. kms spreading over three states of Madhya Pradesh, Maharastra and Gujurat. The project envisages the construction of 30 major, 135 medium and about 3000 minor irrigation dams and power complex, which will create additional irrigation potential and also provide water for both industrial and domestic use. The implementation of such massive project require huge finances, which can not be afforded by a country like ours and naturally depends on external finances. Considering the magnitude of the finance requirement the project asked for World Bank assistance through Indian Government. It is stated in one of the Gujarat Governments's booklet that the Sardar Sarover project alone reveives 300 million dollar IBRD loan and IDA credit for Dam and power components, while another 150 million dollar IDA credit is available for the construction of main canal and distribution system and the project is also expected to receive YEN credit from Japan approximately equivalent to Rs. 150 crores.

Benefits

The benefits of the project are extended to the states of Madhya Pradesh, Maharashtra, Gujarat and Rajasthan. While highlighting the benefits of the project Mr. N.K. Singh (1987) in an article titled "Narmade Project Churning Controversy," says that both Narmada Sagar and Sardar Sarovar Projects were anticipated to irrigate 19 lakh hectares of land, benefitting about one crore of people and also create an installed power generation capacity of 2,250 mw, which will earn about 2,000 crores a year by sale of electricity alone. The total culturable command area in the entire Narmada Valley project is estimated to be around 20,000 hectares. The irrigation is expected to produce 80 lakh tonnes of food grains annually, besides increasing the production of cotton, sugarcane, vegetables and fruits. The projects are also expected to check floods, generate pisciculture and provide employment in the area. Further, in a booklet titled "Sardar Sarovar (Narmada) Project, "by Government of Gujurat, highlighted that the Sardar Sarovar Project alone creates an additional irrigation potential of 17.92 lakh hectres, besides providing water for domestic and industrial use to 131 cities and 4720 villages in the command area. The power benefits from the project will be shared by Madhya Pradesh, Maharashtra and Gujurat in the ratio of 57:27:16. According to Mr. Amarsingh Chaudhary Chief Minister of Gujurat State the project would generate employment opportunities to four lakh people during the implementation stage. Further, when the project is completed, there is enough scope for developing agricultural subsidary activities, viz., animal husbandry, dairy industry, fertilizer industry etc, which is expected to generate employment opportunities for more than six lakh people.

Damages

The biggest damage caused by the project is the largest human displacement and submergence of large chunks of fertile ageiculture lands and rich forests. It is estimated that both Narmada Sagar and Sardar Sarovar projects together will displace more than one lakh people in about 400 villages in Madhya Pradesh, Maharashtra and Gujurat. While Sardar Sarovar will totally submerge 37 villages ans partially another 200 villages, consisting of about 10,000 families or about 67,000 people, the Narmade project will submerge 89 villages fully and partially another 60 villages and affect 105 other villages where relocation of people is not required. In a note titled "Narmada dam will uproot lakhs" by Vimal Jhanjari, he says that according to Mr. R.L. Gupta, former irrigation secretary of Madhya Pradesh, both Gujurat and Madhya Pradesh states are in no position to provide the displaced people in their respective states with alternation agriculture lands. Further, a survey carryed out National Institute of Urban Affairs. New Delhi, indicated that only 5 per cent of affected families in Madhya Pradesh are willing to move to the proposed resettlement site. The eviction of these people who are mostly tribals and other weaker sections of society from their homestead lands, depriving them of their agricultural lands and restraining them from their traditional agriculture and forest based activities will naturally bring disaster in their means of livelihood and way of life.

These two projects will submerge more than one lakh hectares of fertile cotton soil, millions of years of old natural rich forests and thick orchards. Besides 23 kms of railway track, 85 kms of road, 45 kms of telephone lines, 19,000 buildings and 3,310 drinking water wells will also be submerged under water (Singh, N.K. 1987) In addition, the ecological damages caused by the project is expected to be far greater when compared with other similar projects. The submergence of fertile lands and forests will increase all kinds of human pressures and lead to decrease in the life span of the dams, massive soil erosion, lowering of water tables and decrease infertility of soil in the proximity of the project area.

According to a study carried out by Indian Institute of Science, Bengalore indicated that about 40 percent of Narmada Sagar's command area is likely to be water logged. Further, in a note titled "Environmental aspects of Narmade Sagar and Sardar Sarovar Project alone is Rs. 30, 293 crores.

Damages outstrip benefits

Though the projects will induce substantial benefits in the form of creating additional irrigation facilites, power generation, employment opportunities, infrastructure development, etc, but the damages are outstripping the benefits, because most of the benefits are accruing to the unaffected community in the command area, rather than to the affected population. One of the Studies indicated that the dams are not positive proposition, because the cost benefit ratio is only 1: 0.46. The displaced people, who are mostly traditional people still live in 'Nature-Man-Spirit' complex, will suddenly be exposed to new culture. Adjustment with a new way of life and finding out a better way living calls for planned ways of reorganising the economy and society, so that these local inhabitants are not thrown away from the process of development. which will take place with the implementation of these two projects.

The displaced people require a planned approach of rehabilitation to minimise the hardships, as these traditional people show a great attachment to their habitat, lands and other belongings, which are so near and dear to them for generations together. As the damages will not counterweigh the benefits, it requires proper care for balancing the damages with benefits. The following are some of the measures for planned rehabilitation of displaced persons. (1) The most important aspect of proper rehabilitation is the selection of resettlement site, which should be done in accordance with liking of the affected people, since they have great attatchment to the soil. This perhaps may give some consolation to resettle them in the new places and improve their standard of living they were enjoying prior to their displacement. Further, the work of rehabilitation must be completed before the lands of catchment

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How can we fight parallel economy

Praveen Jaiswal

Black money is not only a political pollutant but a general conscience-killer also, according to the author. He suggests here certain ways and means which include the perception of a controlling agency under whcih all the basic needs should be made available to everyone by the State. He is of the opinion that problem can be tackled if the Government disallows purchase of luxuries and not only clearly defines what are basic necessities but also helps people to meet these necessities.

INDIA'S SAINTS AND SAGES in common with philosophers, regarded wealth as the source of countless evils. While it is true that abysmal poverty also is the cause of many malpractices and crimes, vast accumulation of wealth is no less a cause of deterioration of the human character. Human character can create wealth but wealth cannot create character, rather it gradually ruins it and creates conditions in which the basic virtues of existence decay or are destroyed. Mahatma Gandhi taught that wealth should be regarded as a public trust, to be utilised for public good and the welfare of one's fellow-beings. But how many people follow the Mahatma's teachings ?

Parallel economy

The phenomenon of parallel economy has been looming large in India for quite a few years and has generated an eternal debate on its growth and expansion, its effect on the social, economic and political facets of the national and individual life, and the remedial measures taken to resolve the problems.

The phrase "parallel economy", used interchangeably with black money or black economy suggests that it is parallel to the white economy which is a misnomer. Black money and all that it stands for are no longer parallel to the main stream of the economy but converge with it. The black money sector and the white money sector have, over the years, been interacting so much that they have virtually lost their identities. Black economy is no longer regarded as so fainted and carries no stigma today as it used to do long back.

The term 'black money' has three connotations . black turnover, black income and black wealth. The nature of the latter two is different. While black income is a flow of black wealth and fund, both are included in black money. Broadly speaking, all illgotten incomes, wealth or assets are included in black money. They may be generated in various ways such as gambling, smuggling, prostitution, tax evasion, under invoicing. benami transactions, etc.

A global phenomenon

Corruption, black and unaccounted money accentuate inequalities and shortages of consumer goods, which lead to the various circle of inflation. It needs to be underlined that black money is, in fact, not restricted to India but has engulfed several developed and developing countries. It is now a global phenomenon.

The crucial question is how the black money is generated. As one writer put it; black money is generated every hour. It is, therefore, difficult to list up the multiple ways it is being created. The complete erosion of traditional values of life and the metamorphosis in the living styles are the fundamental causes of the black money phenomenon. The impolitic and unprincipled political activities are also blamed for the generation of vast amounts of black money. The noted economist, Mr. D.R. Pendse, has speculated, on certain

assumptions, that black money of the order of Rs. four hundred crores would have been obliged to be generated in the system, just to finance the Lok Sabha elections. The government formulates such economic policies as attract unscrupulous traders and industrialists who manipulate them to their advantage. Secondly, the defective implementation of these policies also helps them in achieving their end i e amassing black money The desire to keep up with the Joneses is strong and, in most cases, irresistable thanks to the growing inter-regional, interpersonal and international income disparities The Gandhian doctrine of trusteeship is a utopia, whatever its merits. The demonstration effect drives a person to resort to devious means to get-rich-quick and live as others do with black money, if necessary. A chain reaction follows

Now, income tax payers in India are only 0 37% of the population, out of whom 80% are employees with fixed incomes. This means that all taxes, inclusive of direct tax, sales tax, excise duty, octroi and such others, are evaded in a big way As a result of inflation, industrial prices have been rising, but agricultural price's have not been keeping pace By and large, the rich in the city are getting richer and rich in the agricultural sector are growing relatively much less rich than their counterparts in the cities This in turn, leads to clashes between the rich farmers and the others whose incomes are too low Already the farmers have begun to rise leading to clashes In the same way the interests of the landless and other labour also are bound to clash, breaking there-by the entire fabric of society and posing threats of dictatorship

Conscience killer

The most destructive effect of black money is its dehumanizing influence It is a conscience killer and a political pollutant Nothing is considered anti-social in making black money and spending it for various purposes Further, the unaccounted money prevents a true picture of the state of the economy-the growth of savings and investment, national income, capital formation,etc. The tax evasion which is the fountain-head of unrecorded money is so much loss of revenue to the public exchequer On social grounds the process of un-reported income widens the rich-poor gap. The black money tends to cause serious distortions in the production and the consumption patterns. Mis-allocation of the scarce resources goes on by default. The parallel economy frustrates the efforts of the government for the uplift of the people through monetary and credit policies. With the persistent negative balances of payments, the losses in the foreign exchange earnings on account of smuggling and manipulations of invoices have started looming large.

How to liquidate it ?

There is no economic policy worth the name for the liguidation of the parallel econoy. Black money has to be reduced and stopped. It is the first step needed to scotch the parallel economy. The only way out therefore, is to make parallel economy worthless and useless. For this purpose, we may have to divide the production in the country and imports into three parts.

(1) bare basic necessities;
(2) ordinary necessities of middle class families; and
(3) the rest i.e. luxuries, which constitute conspicuous consumption and are mostly bought with moneys from the parallel economy.

The first should be the responsibility of the Government to supply to each and everyone; the second should be allowed to be bought by all, and the third should be prohibited from use in the country. And to do it effectively, we must perforce have some kind of a rigid society, a controlled one. Under the scheme, all basic necessities must be made available to everyone in the country by the State. All parallel and superfluous money should be rendered useless by laying down that no one can buy anything except basic necessities. All basic necessities should be clearly specified, strictly controlled and properly distributed. This was done in a big way during the war-time in India. Everyone used to get at that time only a few yards of cloth, a few gallons of petrol or kerosene oil, and limited quantities of the other rationed commodities. In England then, to wear torn-patched-up clothes became a fashion, which has since spread and become almost world-wide. A rationing of some such sort will have to be evolved.

In his book "The Great Crash", John Kenneth Galbraith, a former U.S. Ambassador to India, has this to say on the subject of centralisation of management and control:

" the instrument for accomplishing this centralisation of management and control was the holding company. These brought control of the operating companies. On occasions, they brought control of other holding companies, which in turn, directly or indirectly through yet other holding companies controlled the operating companies"

Curative measures

Demonetization of notes of high denomination, voluntary disclosure schemes, special bearer bonds for short periods and raids to bring economic offenders to book are but "cosmetic measures" The malady is deep seated, cancerous and calls for surgical operations Not gradualism but radicalism, once-and-for all, is needed. To arrest proliferation of black money, to contain it and to eliminate it, ultimately, is a Herculean task and requires crusader's zeal Some of the curative measures may be suggested.

(1) The entire gamut of controls need to be thoroughly reviewed and reformed.
(2) There should be no escalation in tax rates; tax laws should be rationalised; strict tax compliance should be aimed at, tax rates should be reduced if it helps in deceleration of black money generation.
(3) Fundamental changes in election laws and

practices should be made without any further delay.

Pernicious role

The pernicious role that the black money has been playing in the national and individual activities must be cut short. Gandhiji had clearly stated that our economy should be village oriented and that our handicrafts should be revived and revitalised extensively; so also in his Peoples' Plan, M.N. Roy had advocated an agriculture oriented economy. Mao, the Chinese leader, too did so, from 1949 onwerds, fairly successfully; he increased handicrafts production in the villages and made villages as much self-sufficient as possible and succeeded in banishing vicious circle of poverty from the villages. But, all along, our Government went in for large scale technology, aping the westerners and the Russians, and has created a tremendous increase in unemployment over the last thirty years. It is now imperative to turn to the villages again and produce all the basic requirement of people in the villages and small towns themselves. This alone will increase employment.

Stamp out corruption

The other thing to be done is to reduce inequalities and stamp out corruption. Though late, we should do it atleast now, or face the disastrous consequences of such omission which will sweep away not only the ruling party but all the parties, and result in nothing but chaos, anarchy and lawlessness and the desturction of all "values" which India has cherished for so long.

For common good

Accumulation of wealth is an obstacle to the working of democracy because of the gross and unwarranted inequality it promotes. Democracy postulates equality, both of resources, opportunities and, as far as is practicable, of economic possessions. Wealth treasures actually tend to "dehumanise" people; they erode the essential human value. As Jawaharlal Nehru said, "It is not easy for the upper class drawingroom to understand the humble cottage or the mud hut."

Even the Founding Fathers of the Constitution went further to lay down, as stated in Article 39, that "the ownership and control of the material resources of the community should be so distributed as best to subserve the common good ... and further that the operation of the economic system should not result in the concentration of wealth and means of production to the common detriment."

Saints and philosophers have expressed the view that the best thing a very wealthy person can do is to spend his wealth for the benefit of fellow human beings. He that does not use his wealth for the good of others while he is living, prevents it from doing good to himself when he is dead, and by an egotism that is suicidal cuts himself from the highest pleasure here and also happiness after shedding the mortal coils.

Life without black money would be worry-free and tension-free and the national economy would grow healthier and political pursuits would purl. ☐ ☐

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area are submerged under water. (2) Instead of paying compensation money at a time, it is suggested that it should be paid in installments, so that the people may realise after spending some amount, about its proper utilisation (3) Minimum facilities like drinking water, approach roads, supply of food grains and other essential facilities must be completed in the new colonies, before they move to the colonies, to minimise the hardships to enable them for smooth adjustment to the new environment. (4) Another important aspect of rehabilitation is to provide an alternative gainful employment to the affected people. Therefore imparting training and skill formation is very vital, because most of the people deprived livelihood from their farm lands. This will enable them to find an alternative jobs in non-traditional sectors. (5) All the Government sponsored employment schemes should be made available to the affected people and appropriate safeguards should be evolved on the agreement between the contracts of various works and the project that the affected people should be provided employment on continuous basis, and (6) As these two projects are subjected to several environmental implications, it is suggested that massive afforestation programmes should be undertaken for preserving the environment and also measures for anti-soil erosion and preventing water logging should be undertaken for proper ecological balance in the project area.

It is worthmentioning that without effective and proper rehabilitation of evicted people and measures for maintaining the ecological balance, the very cause of implementing river valley projects for nation's prosperity is lost. ☐ ☐

States asked to intensify dehoarding of foodgrains

The States have been specifically asked by the centre to intensify measures for dehoarding of foodgrains to ensure their easy availability at reasonable prices. In a recent communication to the Chief Ministers of all States and Union Territories, Shri H.K.L. Bhagat, Minister of Parliamentary Affairs and Food and Civil Supplies has impressed upon them the urgency and necessity of intensifying dehoarding operations in context of the present rising trend in the prices of rice, wheat and wheat products. He also suggested them to consider fixing of stock limits for wheat and rice, taking an overall view of the availability and prices of foodgrains prevailing in their States.

It may be mentioned here that the Ministry of Food and Civil Supplies too had advised the State administrations sometime back to initiate appropriate action in this regard.

A plea for use of artificial sweeteners

T.R. Mahajan

The author points out that excessive intake of refined sugar (sucrose) is a serious health hazard which can cause very dreaded diseases like diabetes, coronary and intestinal disorders and obesity, etc. That is why use of artificial sweeteners (Saccharin, Aspartame, Cyclamate etc.) is highly dasireable. He enumerates multi-dimensional uses of artificial sweeteners. But at the same time he answers various queries and doubts raised about the utility of these artificial sweeteners, and gives the findings of nutrition experts, in support of these sweeteners.

THERE IS A WORLD-WIDE UNANIMITY that refined sugar causes, to a wide range of civilization, diseases like tooth decay, diabetes, obesity, coronary and intestinal disorders (caused by overweight) Professor Hellmust Mehnert of Federal Republic of Germany had advised the over-nourished societies of the western countries to do without unnecessary sugar calories and recommended the use of artificial sweeteners and other sugar substitutes. Professor Scheinin of Finland had declared that even 10 grams intake of sugar daily can cause caries. Dr. Campbell of South Africa gave an idea that per capita consumption of sugar should not exceed the limits of 32 kg. per annum which does happen in industrialised conntries. However, in developing countries like India sugar still plays an important part in providing energy and nutritional values to our people. In India the per capita availability of sugar was 10.9 kg. in 1985-86. But an issue is still open to researchers whether excessive consumption of sugar can cause dreaded diseases like cancer. In the regerd the findings of an alarming study of Huntingdon, are yet to be confirmed

Substitute of refined sugar

There is a greater emphasis from medicinal point of view that intake of refined sugar (Sucrose) may be reduced to the minimum. An an alternative to refined sugar, come before us the artificial sweeteners.

Sweetening agents are generally divided into two categories :

— Calorie Sweeteners (e.g. sugar, corn sweeteners, honey, etc.).

— Non-calorie Sweeteners (e.g. Saccharin, Aspartame, Cyclamate, etc.

Non-calorie sweeteners are usually called artificial sweeteners. Relative sweetness of sweetening agents which is determind in relation to sucrose, taken as usual standard, is as follows :

Table I

RELATIVE SWEETNESS OF COMMON SWEETENING AGENTS

Common Sweetener	Approximate sweetness (Sucrose-1)
Aspartama	180
Cyclamate	30
Pure Crystalline Fructose	1 2 - 1 7
Saccharin	300 - 450
Sorbitol	0 54 - 0 57
Alesulfam-K	200

Artificial sweetener which acted as an additive to our food stuffs and pharmaceutical products has been thoroughly open to research institutes, food laboratories and scientific teams. The first sweetener which came to be discovered was Saccharine in 1879 in the course of investigation by Ira Ransen and C. Fahlburg of John Hopkins University, USA. Then came the discovery of

Cyclamate in Canada and USA, later joined by aspartame and other sweeteners—Alesulfam-K, Fructose, Glycergic acid, Hydroflourene, 'xylitol, Harmextas, Sorbitol, Maltose, Lactose, Gulucose D and Gulucose I, Dextrose etc.

Uses of artificial sweeteners

Artificial sweeteners as an alternate source of sweetness serve a number of purposes. They are used as :

(1) Additive food and beverage choices for those who must or want to control calorie, carbohydrate or specific sugar intake.
(2) Assist weight control or reduction.
(3) Help in the management of diabetes.
(4) Check the decay of dental cavities.
(5) Act in preparation of pharmaceuticals & cosmetics.
(6) Provide sweetness when sugar is not available.
(7) Act in the cost-effective use of limited resources.

Artificial sweeteners provide the means of preparing good tasting foods and beverages with reduced calorie content. Replacing 100 gms of sugar a day with an artificial sweetener can save 400 calories a day-the calorie reduction recommended by Food & Nutrition Board of USA.

The principal artificial sweetener which still rules the Indian market is Saccharin, Sodium Saccharin in tablet, powder and liquid formation. In Indian market it is being consumed by diebetic patients, pharmaceuticals, soft-drink manufactures, bakery products-biscuits, cakes and cookies, ice-cream manufactures, tooth paste and tooth powder, cosmetics, pan masala and in electroplating.

Pros and cons

Doubts about the safety of Saccharin were raised in research study in Canada which showed increased incidence of the cancer of urinary bladder in male rats. Saccharin is not metabolised and has no food value. It was banned in USA in 1912 because of the fear that people who used Saccharin instead of sugar would be deprived of nutritional values. However this ban was lifted later on due to strong opposition. Since 1950, USA sales of Saccharin have increased. Later Cyclamate was introduced which was banned in 1969. In India Cyclamate was banned by Government in 1979 because its mixture with Saccharin had caused bladder tumor on rats, as revealed by the Research findings.

Artificial sweeteners are often superior to natural sugars in developing tastes of drugs and can eliminate technical difficulties (e.g. by eliminating the bulk associated with sucrose). In addition, many persons on carbohydrate-restricted diets take drugs, so it is desirable that drugs do not contain sucrose. Artificial sweeteners may be less expensive for their use, either alone or in conjunction with sucrose or other artifical sweeteners.

Marketing of saccharin

In the last 10 years or so, the Peoples' Republic of China, the Republic of Korea have started production in addition to established manufacturing in Japan. The countries in which Saccharin and its amonium, sodium and calcium salts are marketed include Argentina, Australia, Brazil, France, Federal Republic of Germany, Netherland, Italy, Japan, Mexico, Portugal, Spain, South Africa, U.K. and U.S.A.

The US market of Saccharin is 2700 tonnes per year, whereas European market comes round 1500-2000 tonnes and would market around 7000-9000 tonnes. In India, the market survey conducted by the Marketing Research Corporation of India in February, 1987 has revealed its market around 600 tonnes per year thus accounting only 6 per cent of the world market.

What nutrition scientists say

The food industry, in the coming years, is expected to offer more sugarless products irrspective of restrictive practices of the authorities. The toxicologists and nutrition scientists from 20 countries of the Western would who assembled in Geneva, had reached the unaniomous conclusion, based on their own studies or of their colleagues that niether Saccharin nor Cyclamate can be considered to have mutagenic or carcinogenic properties. The question of the safety of non-nutritive sweeteners has been supported by a sound scientific evidence.

The experts have discussed the role of non-caloric sugar substitutes such as Saccharin, Aspartame, Alesulfam-K Harnmextas, Maltitol, Xylilot, Glycergic acid, Fructose, Hydrofluorene, Sorbitol, Sorbose, Lactose, Dextrose and some new developments. These sweeteners play an important role in satisfying the sweetening requirements of diabetic all the more, as they are matabolised independently from insulin.

Some new sweeteners

A number of new sweeteners are being readied for market before the end of century, with scores of others under study in U.S. market according to Melrin Wolkstein, President of US Consulting Firm, Reach Associates. The major cost improvement, which will cause considerable upheavel is Fructose powder. Efforts are afoot that retail prices of Crystalline Fructose will be competitive agent is Polydextrose which is produced by Pfizer. Aspartame which is almost 200 times sweeter than sugar and other newly developed high intensity sweeteners will further intrude upon sugar. Several high temperature Aspartames are in the pipeline. A super Aspartame, which is upto 5500 times sweeter than sucrose and more stable than Aspartame has been patented by Anwar of France.

Sucralose is a cholinated sucrose which is about 600 times sweeter than sucrose and stable at high temperatures. there are plans to submit the sweetener for approval in the U.K., Canada and the U.S. In India too,

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BOOK REVIEW

EDUCATION AND THE PROCESS OF CHANGE Edited by Ratna Ghosh and Mathew Zachariah. Published by Sage Publications (India) Pvt. Ltd., M-32, Greater Kailash Market I, New Delhi 110048. First published: 1987. Pages 301. Price Rs. 190.00

In retrospect the book makes a penetrating evaluation of the— Indian educational system as it has evolved itself in the last four decades. Fourteen essays have been contributed by various aspects of the subject.

It has been pointed out that despite the high priority given to the Constitutional directive of universalisation of elementary education (6 to 14 age group) the first target date of 1960 was undoubtedly too ambitious. Nor is the intended target of 1990 likely to see this accomplished. Actually, nearly 30 per cent of the 6 to 14 year-olds or 60 million children, do not go to school. The majority of children who do not enrol are from the socio-economically disadvantaged sections of the population, who for a variety of economic, social and cultural reasons either stay away or drop-out.

Surely, the gains have been largely in higher education and the benefits have been derived mostly by urban middle class women. Only about 3 per cent of the female population have university degrees and a small percentage of them are visible in positions of power and prestige. It has also been observed that the number of Scheduled Castes and Scheduled Tribes pupils has gone up three-fold during 1950-76 but their literacy rate was only 21.38 per cent.

While the .promotion of equaliiy of opportunity in modern India goes hand in hand with a continuing inequality in condition which exacerbate problems, the success of education in providing opportunities for social mobility is still confined to the middle-and-upper castes in rural and urban areas. This has promoted the formulation of a new education policy in 1985 but its social and economic context is riddled with problems that have surfaced in regard to the role of education in national development.

The papers in this volume deal with issues like structural constraints, scientific and technological education, the strategies for improvement and social change for cultural revitalisation. Iqbal Narain's paper tackles the problem of university education in its various ramifications. Although education is the dependent variable in a complex socioe-conomic system, he concludes that hope for reform lies within, not outside, the system. Suma Chitnis explores the impact of massive investment in educational institutions in so far as bridging the gap between the privileged and the disadvantaged sectors of the population is concerned Usha Naidu takes a look at the problem of child labour and its educational facilities while Vina Majumdar discusses the subject of improving women's status through education.

Ratna Ghosh has ably summarised the various papers contained in this book and Mathew Zachariah has made a useful comment on the various views expressed. However, nowhere in the book it is mentioned as to which, where and when the conference was held though it is said that the papers were presented at the conference. Also, bibliography and index are conspicuous by their absence

Navin Chandra Joshi

Art & Culture of North East India By L.P. Vidyarthi Published by Publications Division, Patiala House New Delhi PP: 124, Price : Rs. 40/-

The publisher is again to the fore with this valuable brainwork of one of the outstanding anthropologists of recent times whose research endeavour extending to the Himalayas and the culture of Himalayan Region had deservedly earned him wide acclaim in the national and international scenario of social studies. Through his competent pen he has almost visualised in this volume the very art and culture of North-East India, in all its ramifications.

The North-Eastern Region of India, despite its richness in natural resorces, natural beauty and rare heritage of art and culture had suffered from oblivion during the British regime. Progress and development had been negligible. Accordingly, in deference to the demands of a democratic set-up brought to being in the entire region, extensive research on the various aspects of life existing over there, the extent of natural potential, and betterment of the people of the region was of imperative necessity. The author has taken cudgels in giving an authentic account of the various aspects relating to the region under the broad chapters of "Research on Art and Culture" "Land and People", "Demography" "Ethnicity and History", "Changing Jhum Economy", "Art and Craft" and " Changing Cultural Scene". The description is to the point, replenished by statistical data and illustrations here and there, coming upto the overall readability of an erudite study.

This attractive paper-back of royal size with exquisite get-up and a very reasonal price is bound to draw sizeable readership.

R.P. Rahi

FOLK TALES OF RAJASTHAN : Compiled by Dinanath Dube; pages-72, Price-Rs. 10.00
ONCE UPON A TIME (FOLK TALES OF PUNJAB): Compiled by Shaharyar; Pages-40; Price-Rs. 7.00.
FOLK TALES OF TAMILNADU: Compiled by Mugarai Rajamanickem; (translated by S. Radhakrishnan); Pages-64; Price-Rs. 15.00 Published by the Publications Division

To be or not to be-that is the question with folk tales also. True, these tales are spontaneous expression of folk psyche. They narrate the human experiences of a society. Recorded History is often the chronicle of kings and queens and their lesser counterparts, written by privileged and favoured elites. But the pulse of the common people can only be felt in folk-lores. They witness their development, their fallings and aspirations, their sufferings and joys, their customs and traditions. As such, they provide us with the roots, without which we will remain superficial and hollow

But everything is not gold in our past Loyalty to the feudal lord, strict caste and rank system, and subjugation of women were the 'values' of that society, which deserve only to be thrown in the dust-bin today. As perpetuation of tyranny and exploitation could not be possible by fear of punishment only, psycho-emotional tactics were used frequently to ensure complete subjugation. Such 'values' were glorified and were made a part of 'morals' and 'religion'. It resulted in mental slavery of the exploited as they never dared to break these 'values', as it tormented the 'Conscience' and punishement was ensured even in 'next life' 'Sacrifices' either for the feudal lord, or in the shape of 'Sati', and 'Johar' were eulogised. All these things have profusely polluted the brains of our folks and these trends have been reflected in folk-tales also.

Now, as the basic target readership of folk-tales are children, too vulnerable to impressions. So, when we present folk-tales to them, we must be responsible, cautious and selective so that none of such obnoxious 'values' infiltrate' their conscious and subconscious minds. These 'Values' once planted will be very difficult to be faded away and will ruin all efforts to develop them into rational, modern and scientific in later age. The dangers of polluting the future generation with stinking, obsolete thoughts are obvious. It is regretted that there is no sign of required in-depth study in the selection of stories in these books. The very first story Punjab's Tales suggests the 'moral'. How to 'tackle' the arrogant wife ? Obviously by terrorising her. These tendencies do exist in folks. But when the tale is meant for the children, it is, no doubt a folly of selection. It becomes a graver folly, as the work is undertaken by a Government Publication.

Take the tales of Rajasthan. Most of them are not even folk-tales in true sense. These are rather pseudo-historic stories. Most of them deal with the glorification of Rajput princes fighting with Sultans and Pathans (or among themselves). Usually a woman is the 'catch' and personal whims and selfing ends have been given the fair names of patriotism or defence of religion. The struggle between Moghuls and Rajputs in Medieval India was a struggle of supremacy among feudal lords. It had nothing to do with religion and patriotism. Religion was used, as ever, for political convenience of warring lords. As for patriotism, it was parochialism at best, as each territorry of, say, twenty miles, was a 'nation'. As for common people, different races and creeds have contributed to a composite culture and we are the progeny of it. Division of this composite popular legacy on fanatic lines had promoted obscurantism only and will certainly hamper scientific and rational thinking. History with such unscientific emotional sweeping has dangerous implications.

Entertainment is another major criterion. Folk tales are to be 'told' to children by grandma or grandpa and not simply to be 'read' by elders. Telling story needs dramatic diction and visual details, interwoven plots, problems-solutions,new problems, stroke of luck, bizarre happening 'Beauty' should not be beautiful alone, it needs at least a paragraph of cinematographic details to satisfy the 'Hows' and 'thens' of children And the 'Beast' is simply not ugly and crooked, but must present a sumptuous feast to the bulging eyes of little kids. And after a long-long pulsating development, after a series of ups and downs, 'hows' and 'thens, the suffering 'good' fellow 'defeats' the contriving 'bad' one with skill, honesty, hard work, and of course with surprise help of Lady Luck or with the blessings of some benevolent supernatural power It really needs an elaborate visual and colourful stuff to make the child spell-bound from 'long long ago' to 'and they lived happily everafter' This is the secret of the popularity of 'Alibaba and 'Cyndrella'.

On this front also, these folk tales lack the imaginative and psychological insight They are just 'written' and the care has not been taken for the 'telling aspect'. 'Tamaktoo' (tale from Rajasthan) is a charming story There are some other good stories in other two books also But the propertion of entertaining tales is not good enough

Folk-tales reflect the tendencies, living-styles, whims, struggles and even topography, economy and temperament of a particular region. The books under review also prove this point We face the enterprising, gay and witty-naughty Punjabis as well as the loyal and brave Rajasthanis. But the Tales of Tamilnadu deserve special mention in this regard. They have a distinct Tamil colour. A really pleasant thing to observe is the interaction of the mythological characters of Northern India (Pandaras etc.) with the native Southern characters in some tales, indicating the process of confluence of cultural streams.

Rajendra Bhatt

MASS MEDIA IN INDIA-1986-compiled by RESEARCH & REFERENCE DIVISION, published by PUBLICATION DIVISION-page 265 price-Rs. 50.00

The annual number presents in a nutshell the media scene obtaining in the country during the period April, 1985 to March 1986. *The editors of this compilation* deserve a word of praise firstly, for the well planning of it and secondly for the host of information regarding various media given in it.

In the articles section of it, there are thirteen articles each written by a distinguished contemporary journalist. The range of these articles is vast in as much as divergent topics from 'Media policy' to 'Documentation Technology' have been included in it. A conscientious reader, however, feels that while the inclusion of an article on Bengali press is well deserved, a discussion about the growth of other regional language press would have been relevant. Thanks to the care and discretion applied by its editors towards selection of the articles for this number, the articles 'Mass Media and National Integration', 'Radio and Rural Development', 'Education through Mass Media', 'Television in the service of the Nation' and 'Films' and Social Change' altogether drive the reader home, how the media in a developing country like ours has become a powerful instrument in nation building. Besides, the articles such as 'Television Journalism-Reality and Potential' 'News Agencies in India', 'Rolling the paper carpet for News', 'Teletext turns New Leaf', and 'Asia-Pacific Institute for Broadcasting Development' give the reader a fair idea not only of the functioning of various media but also of their development in phases,

The other section dealing with media organisations gives details about the Information machinery of the governments in the centre as well as the states and union territories plus how it works. The latest available figures for area, population, literary percentage, total circulation of newspapers, the number of dailies published, their names and the location of Radio and Television stations are a useful addition.

Finally, besides these two sections, there are two other chapters in this number, namely 'Chronology of Events' and 'Appendices'. The importance of inclusion of these two chapters can hardly be over emphasised. But for their inclusion the very purpose of bringing out this number as a reference book for the students and researchers in mass communication would have been defeated.

Dilip Kumar Ghosh

(Contd. from page 31)

some of these sweeteners may appear in the market in the coming years.

As mentioned earlier, the use of artificial sweeteners-Saccharin or Sodium Saccharin and Sorbital-is extensively made in Indian market in pharmaceutical products, soft drinks, tooth paste, ice-cream, biscuits, Pan Masala and tablets for consumption of diabetic patients. Because of this industry being located in the small sector, no official production figures are available. However, on the basis of consumption estimates in the course of Market Survey the consumption and demand estimates have been formulated by segments of industry.

TABLE II

Industry Segment	Actual Consumption Year 1986	(Tonnes) Estimated Demand 1987	1988
1 Pharmaceutical	299 90	329 89	362 88
2. Diabetic patients etc.	14.42	15 20	15 87
3. Soft drinks	46.42	50 96	55 96
4. Tooth paste	52 80	57 00	61 60
5. Ice-cream	61 70	66.00	70 60
6. Biscuits	48.68	53.55	58 90
7. Pan Masala	26.00	27 82	29 76
8 Cosmetic	11 00	11 22	11.44
9. Electroplaying	11.00	11 55	12 12
Total	571 90	623 19	679 13

Production and estimates for Glucose and Dextrose are produced here. Glucose is abundantly used in manufacture of biscuits and Dextrose in manufacture of *confectionery candies and toffees. Their production* figures and estimated demand is as follows.

TABLE III

'Tonnes'

Year	Production	Glucose Year	Estimated Demand
1982-83	40014	1988-89	86160
1983-84	43000	1989-90	95076
1984-85	44523	1990-91	105153

Year	Production	Detrose Year	Estimated Demand
1982	175000	1988-89	36,114
1983	190000	1989-90	42,454
1984	195000	1990-91	50,180

There is a felt need of introducing an artificial sweetener as an alternative to sucrose which must have satisfactory taste, stability, solubility, low cost and be baked by Food and Drug authorities of Government on scientific research findings. □ □

TO OUR READERS

As announced in our issue of March 1-15, 1988, the next issue, i.e., of March 16-31, 1988 was to be on 'Population Growth & Urbanisation'. Because of certain problems, that subject could not be focussed in our March 16-31 issue. An issue on this subject will be brought out in the near future.

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Whither rural industrialisation ?

I.R. Khurana

In this article the author gives an overview of the policy measures taken so far for the promotion of small enterprises especially in the rural areas. He enumerates the steps taken by the government since the first Inustrial Policy Resolution of 1984 to give a boost to small enterprises with an emphasis to reduce the incidence of unemployment in the rural areas. The author says 'there is need for shifting the labour force to non-farm employment and in this rural industrialisation does have a crucial role to play. He is not happy with the level of achievement in our efforts to promote rural industrialisation.

AT THE TIME OF INDEPENDENCE, India inherited a truncated economy with a stagnant agriculture and an under-developed industry. This fact was also brought out by the Census of 1951 which revealed that 72.1% of the working force depended on agriculture, while 10.6% derived their livelihood from secondary sector and tertiary sector provided employment to 17.3%.Not only that, more than 80% of the people lived in village.. The foremost task before the policy makers was therefore to rectify this imbalance and the work force needed to be shifted from low productivity agriculture to more productive non-farm operations. It was also realized that the rural labour force should be provided with work nearer to their place of living and its exodus to urban areas avoided (as the urban environment had alreadv deteriorated significantly due to mass migration of people from Pakistan to urban areas), so a to reduce both the social and economic costs. In th context it was considered imperative to take u industrialization of rural areas.

In fact, the very first Industrial Policy Resolution (1948 had emphasized as follows :

"Cottage and small industries have a very importan role in the national economy. These industries ar particularly suited for better utilization of loca resources and for the achievement of the local self sufficiency in respect of certain types of essentia consumer goods. The healthy expansion of cottag and small scale industries depends upon a number o factors like the provision of raw materials (whereve not readily available locally such as steel), chea power, technical advice, organized marketing of thei produce and wherever necessary, safeguards agains intensive competition by large scale manufacturers Most of these fall in the provincial sphere and ar receiving the attention of the Governments of th Provinces and the States".

Crucial rol

Taking a cue from this, the First Five Year Plan (1951 56) had assigned a crucial place to the promotion c cottage and village industries in its development strateg Such promotion was taken to be almost synonymou with rural development and it was therefore decided t incorporate rural industrialization in the communit development programme in some of the block Subsequently, selected C.D areas were termed a Industrial Pilot Projects and Industrial Extensio Officers were appointed for these blocks to promot organisational support to this programme by setting u All India Boards for handlooms, handicrafts, sericultur

coir and khadi and village industries to advise and assist in the formulation of development strategies for them.

During the First Plan period the Government had also evolved "common production programme" to provide a degree of protection to the small scale sector. This had also led to the reservations of certain spheres of production exclusively for the village and small industries, non-expansion of capacity and imposition of a tax on the large scale sector and also arrangements for preferential supply of raw materials to decentralized village and small industries.

The shift in policy

On the basis of the experience of the First Five Year Plan and also to realize the basic objectives enunciated in the Constitution, there was some shift in the industrial policy of the Government which was reflected in the Industrial Policy Resolution of 1956. It stressed that "while some basic and heavy industries would be set up, at the same time the Government of India would stress the role of cottage and village and small industries in the development of the national economy. It was felt that in relation to some of the problems that needed urgent solution, they (i.e. village and small industries) offered some distinct advantages including immediate large scale employment, more equitable distribution of the national income, effective mobilization of resources of capital and skill which might otherwise remain unutilized. It further stated that some of the problems that unplanned urbanization tended to create would be avoided by the *establishment of small centres of industrial production* all over the country". The Industrial Policy of 1956 also stated that the aim of State Policy will be to ensure that the village and small industries sector acquires sufficient vitality to be self supporting and the development is integrated with that of large scale industry through the common production programme and ancillarization. It further stressed that the technology would be constantly improved and modernized and the pace of transformation so regulated as to avoid, as far as possible, technological unemployment.

The Second Five Year Plan programme was based on the Industrial Policy Resolution of 1956 which envisaged a big expansion of the public sector. A base for heavy industry was sought to be created during the Second Plan period. In fact, 27% of the total investment during the second Plan was assigned to the industrial sector. The industrial pattern sought to be developed was: (i) increased production of iron and steel and heavy engineering and machine building industries; (ii) fuller utilization and expansion of capacity of producer goods such as aluminium, cement, heavy chemicals and other critical inputs; (iii) increased production of coal and development of nuclear energy); (iv) expansion of capacity of consumer goods keeping in view the requirement of common production programmes and the crucial role of village and small industries in meeting the needs of the common people.

Development of VSI

A separate Committee on Village and Small Industries (VSI) was set up to suggest the strategy for the development of VSI. The Committee (popularly known as Karve Committee) in its report examined the employment, equality, latent resource and decentralization arguments and concluded that VSI need to be developed along with large enterprises and has the capacity to meet the needs of consumer goods during the transitional period. But at the same time it would be 'suicidal' to encourage inefficient enterprises in the long run. From a long period point of view, the capacity of small manufacturers to become technically progressive and efficient and develop competitive strengths shall be the only justification for their continuance. In the intervening period, however, it would be fair to protect them and the government should help create conditions which facilitate their growth. This would also minimize the need for investment funds and the time lag between investmet and its fructification in terms of production.

These recommendations of the Karve Committee were accepted and a number of measures were initiated for making the village and small industries sector a progressive and efficient one. More particularly the immediate objective set for the second Plan was to avoid wider technological unemployment in the traditional village industries sector and at the same time introduce improvement in the sub-sector for its gradual transition to higher technological levels by which it was expected that the rate of investment would have risen sufficiently to provide the needed funds for technological change.

The added emphasis

At the time of formulation of the Third Five Year Plan (1961-66), it was realized that there had been a sharp increase in unemployment particularly in the rural areas as most of the Plan funds had been siphoned off for large and heavy industries and these had failed to provide the necessary developmental leverage for the surrounding areas. Accordingly, the promotion of village and small industries was given added emphasis. Among other things, intensive development of village and small industries was taken up through selected project areas, called Rural Industries Projects. The operational area for each of these Projects was made much wider to coincide with the average size of the district. The new Rural Industries Projects were provided with a nucleus staff and certain nucleus funds of their own. During the period, the Khadi and village Industries Commission had also initiated a programme of 'gram ekais' (intensive development of rural industries having good potential) for securing integrated rural development. Beside these special development programmes, the normal programmes taken up during the Third Five Year Plan had aimed at improvements in the productivity of workers and reduction in production costs by placing relatively greater emphasis on positive forms of assistance such as improvement of skills, rendering of technical guidance, supply of better equipment and promotion of faster growth of industries in rural areas and small towns. These steps were in

keeping with the recommendations of the Karve Committee.

Focus on backward regions

During the interregnum of Annual Plan (1966-69), the question of regional imbalances had become paramount and was subject matter of detailed study by a number of Study Groups which were asked to examine the problem in depth and suggest remedial measures. It was realized that the spread effect of large and medium industries had not been to the desired extent. There was greater need to steer industries away from metropolitan cities to industrially less developed and backward areas. It was felt that apart from disincentives for checking growth of industries in metropolitan areas, there was need for positive incentives to promote industries in industrially backward areas. This had led to the formulation of special schemes of incentives such as subsidy on investment in plant and machinery, subsidy on transportation of raw materials and finished products and schemes of concessional term lending from banks and also certain fiscal concessions to industries coming up in the backward areas selected for the purpose. These concession were announced in early 1970 and are operative even now though somewhat modified.

In the context of the approach evolved for the Fifth Five Year Plan (1974-79), Government had announced its decisions on Industrial Policy in February, 1973. It was emphasized that the Government would ensure that licensing decision conformed to the growth profile of the Plan and that technological, economic and social considerations such as economies of scale, appropriate technology, balanced regional development and development of backward areas were fully reflected. It also reiterated that the existing policy of reservation for the small scale sector will be continued. The areas of such reservation will be extended consistent with potentialities and performance of the small scale sector.

And dispersal

During 1977, there was a change of Government and the new Government announced its own Industrial Policy Statement in 1977. It envisaged that the thrust of the new Industrial Policy would be on effective promotion of cottage and small industries widely dispersed in rural areas and new towns. The policy stated that: (i) whatever can be produced by small and cottage industries must only be so produced. The number of products reserved for such industries was increased from 180 to 500; (ii) special attention will be given to the tiny sector with investment up to Rs. 100,000 situated in towns and villages having less than 50,000 people; (iii) a special wing will be set up in the Industrial Development Bank of India to make available margin money assistance specially to tiny units in the small scale sector as well as to cottage and household industries, and (iv) multipurpose District Industries Centres will be set up to provide services and support required by small and village entrepreneurs. DICs will have separate wings for looking after the spe needs of cottage and village industries as distinct fr small industries. These Centres would establish cl links with the development blocks on the one hand with specialized institutions like Small Indust Service Institutes, etc. on the other. Special arran ments will be made to ensure an effective and ordinated approach for the development and widespr application of suitable small and simple machines devices for improving the productivity and earn capability of workers in small and village industries. The Government would consider introducing spe legislation for protecting the interests of cottage household industries with a view to ensuring that th activities which have large employment potential do suffer from undue competition from small scale large scale enterprises either by reserving the item banning the creation of capacity. A Committee on aspect had already submitted its report and the Gove ment would expedite its examination and take an e decision on the matter. (vi) It would further be Gove ment's endeavour to fully integrate such identi activities and appropriate techniques of product with the broader programmes of all round rural devel ment by incorporating 'Industry, Service and Busin component in IRD programmes.

District industries centr

In pursuance of the above pronouncements, st were taken to create new organizational arrangeme in all the districts called DICs. These DICs w provided with certain nucleus funds. As there was much impact of this new organizational arrangeme up to early 1980, when there was a change in Governm this was subjected to a review, as reflected through Industrial Policy statement issued in July, 1981. It only redefined a small scale unit but also stressed need for promotion of ancillarization and their link with the nucleus plant so as to contribute considera towards dispersal of industries. It observed that Government is determined to promote such form industrialization in the country as can gener economic viability in the villages. It further said t promotion of suitable industries in rural areas will accelerated to generate higher employment and hig per capita incomes for the village without disturb the ecological balance. However, handlooms, handicra khadi and other village industries will receive grea attention to achieve a faster rate of growth in villages.

The announcement of the Industrial Policy Statem of July, 1980 was closely followed by the formulatio the Sixth Five Year Plan (1980-85). Rural devel ment was an attached pronounced priority so as mitigate the hardships obtainable in these areas terms of unemployment, underemployment, level poverty, etc. It was noted that of the estimated to labour force of 268 million in 1980 about 216 mill (i.e., more than 80%) lived in rural areas. The unempl ment rate in that year was estimated at 3.25% in ur areas and about 8.77% in rural areas. Besides

backlog of 12 million unemployed persons at the stage of formulation of the Sixth Plan (i.e. in 1980), there was expected to be additional work force of 34 million by 1985. Accordingly, of the total 46 million persons to be provided avenues of employment, about 32 million, i.e. about 70% lived in rural areas. In the context of these, the Sixth Plan has laid emphasis on taking up programmes which are employment-oriented. It laid emphasis on generation of self-employment opportunities by extending the Integrated Rural Development Programme to all the blocks of the country. In about five years time, it was expected to assist 15 million families. Out of these, as many as 2.5 million families were to be assisted through industrial avocations, i.e., through various cottage, village and small industries, and that 50% of this target was envisaged to be achieved through the cottage and village industries coming under the purview of the Khadi and Village Industries Commission. While the over all progress under the IRD has been noted to be somewhat satisfactory, as the target set for the Plan period is expected to be achieved, progress under the 'Industry, Service and Business' component of the programme and more particularly under its 'industry' component, has not been satisfactory. Recently, the results of the population census of 1981 in terms of work force by Industrial Category have been brought out. Taking the two censuses of 1971 and 1981, the data for which are comparable because of uniformity in the definition of the term 'worker', it is noted that the growth of industrial employment in the rural areas has been about 42% as against 54% revealed for urban areas.

But unemployment persists

The above brief overview suggests that problem of rural unemployment still remains acute. The agriculture sector is more saturated. In fact, there is surplus agriuclture labour force, which in the absence of other avenues of employment continues to cling to agriculture. There is need for shifting the labour force to non-farm employment and in this, rural industrialisation does have a crucial role to play. Although a number of policy measures and programmes have been initiated to promote rural industrialisation, the level of achievement can by no means be considered satisfactory, taking into account the magnitude of the task to be performed.

Recently, the promotion and development of cottage and village industries has been the subject matter of study by the National Committee on Development of Backward Areas (NCDBA). In its report on village and Cottage Industries, the Committee has considered rural areas synonymous with backward areas and had recommended the promotion of village and Cottage industries so as to provide large scale non-farm employment on a widely dispersed basis. For this purpose the basic strategy suggested by the NCDBA consists of three crucial elements, namely, (i) Upgradation of technology to ensure standards and quality of production for wider markets and at the same time reduce drudgery; (ii) create cover organisations so as to provide support for raw materials supply, marketing, credit and technology, and (iii) to adapt a 'group' approach for ensuring viability through enlargement of the base. As regards upgradation of technology, while there cannot be disagreement on this, perhaps it has to be a continuous process and also a gradual one so that technological unemployment at a point of time was not substantial and the increased production could create markets for its disposal, and that there was reduction in drudgery. However, the proper blending of all these sub-elements was somewhat difficult and needed identification by specialised agency either through strengthening of existing institutions like the Council of Scientific and Industrial Research, Council for Advancement of Rural Technology or creation of a new one.

The needed mechanism

So far as the question of creation of cover organisations is concerned, one is to take a view how far the existing infrastructure can meet the requirements. In the context of dispersed nature of activity, due weightage has to be given to both the social and economic advantages. One of the cover organisations recommended by the NCDBA is the setting up of District Supply and Marketing Society (DSMS) at the district level with the responsibility for procurement of raw materials and supply of the same to rural industries, to be run on a commercially viable basis. While the need for this crucial service is accepted, it appears difficult to visualize a situation where the DSMS serving its dispersed clientele could become economically viable. The State Governments are also lukewarm to this proposition. The NCDBA has suggested that a good portion of the produce of the rural artisans could be picked up by public agencies for marketing and disposal. In the context of non-uniformity of standards, this does not appear to be free from complications and misuse. □□

Irradiation of sea food and spices

Government has decided to permit the MSE of irradiation for sterilizing sea food and spices meant for export after the Atomic Energy (Control of Irradiation of food) Rules 1988 are notified. In addition the "Code of Practice for the Operation of Irradistion Facilities" and "General Standard of Irradiation of Foods" are also being finalised.

The sterilisation process involves selective destruction of spoilage bacteria whereby acceptability and marketability of iced fish is extended by giving moderated doses of about 200 kilorads of radiation. This is the only method for removal of pathogens from prepacked frozen product. Single treatment of Gamma radiation can make spices free of insect infestation and microbial contamination, without losing flavour components. The treatments can also be used for prepared ground spices and curry powders. □□

NDC endorses mid-term appraisal

Yojana Correspondent

The National Development Council (NDC) approved the mid-term appraisal of the Seventh Plan at its 40th meeting held in New Delhi on March 19, 1988. The Prime Minister Shri Rajiv Gandhi who is Chairman of the Planning Commission presided over it.

The tone for discussion was set by the Prime Minister himself, who in his inaugural address expressed concern over the slowing down of the growth rate and pace of poverty eradication. There was no alternative to restoring to agriculture its lost momentum, he said, and called for special efforts to produce 175 million tonnes of foodgrains annually, which must be the single important objective of planning in the closing year of the Seventh Plan.

No shift in strategy

Shri Rajiv Gandhi reiterated that there was no change in the strategy of the Seventh Plan as alleged by some Chief Ministers. He said that in the remaining years of Seventh Plan the accent would be on agriculture with emphasis on small and marginal farmers and the efforts would be to take the green revolution to the eastern States. He pointed out that the thrust of anti-poverty programmes was to generate productive employment and only a massive thrust on infrastructure sector would be able to make a dent in employment generation.

Shri Rajiv Gandhi underlined the need to recapture the lost momentum so that in the terminal year of the Seventh Plan, the targets set originally could be achieved. 'Two years of the Plan remain. We should look upon them as two years of opportunity', he added. He mentioned that despite a fall in foodgrains production of the order of 7 to 10 million tonnes, buoyancy in industry and infrastructure had enabled the country to forestall any actual regression and even helped in taking the economy forward

District level planning

Shri Rajiv Gandhi pointed out that the success of the strategy would depend upon two crucial factors—political commitment to agricultural growth, and implementation. In this context, he said that for the Eighth Plan, agricultural planning must be built upwards from the district level and this should take into account local factors, local endowments, local conditions, local priorities. local problems and local potential. 'The national agricultural plan should constitute a summation of these district plans, cast within the framework of national priorities and national resources', Shri Gandhi said.

Apolitical forum

Shri Rajiv Gandhi criticised the efforts of certain Chief Ministers to raise extraneous issues and said that the forum of the NDC should not be used to run down each other. He said, 'We have to put party position aside to discuss development strategies.

What is Planning

Elaborating the meaning of planning, Shri Rajiv Gandhi told the NDC: 'Planning is more than a mere reconciliation of competing budgets of different ministries with the resources available. Planning must be more than just a balancing act.' The purpose of planning he felt, must be to set the goals the nation needed and ensure that they were achieved. He called for a far greater meshing of minds of economists, on the one hand, and scientists and technologists on the other

(Contd on page 34)

N.D.C. forges a strategy

O.P. Sabherwal

A meeting of the National Development Council was held under the Chairmanship of the Prime Minister, Shri Rajiv Gandhi, in New Delhi on March 19, 1988. According to the author, evolving a commonly accepted strategy for overcoming growth lags was an important feature of the NDC meeting. The Centre-State inter-action formed another notable aspect of its deliberations. Given below is a resume of the NDC meetings.

THE CHALLENGE THRUST BEFORE THE NATION by the current economic scene was squarely faced in the third week of March last. The occasion: mid-term appraisal of the seventh five-year plan by the highest planning forum of this country—the National Development Council, which includes the Prime Minister and all State Chief Ministers along with the Planning Commission.

The NDC meeting on this occasion had been invested with more than usual importance half-way through its implementation, the Seventh Plan had been hit by one of the severest droughts this country had faced in recent times. This, as the Prime Minister noted in his key-note address to the Council, meant a set-back. From the average annual rate of growth of 4.4 percent, the growth rate came down to around 1.5 percent. Agricultural production also fell sizeably, with foodgrains production alone recording a steep fall of 7 to 10 million tonnes. A redeeming feature however was that industry and infrastructure displayed buoyancy, with the result that while the overall tempo of growth had slowed down, there had been no regression.

This being the central feature of the prevailing economic scene, the main task faced by the NDC was to evolve a strategy for the remaining period of the seventh plan to overcome the lags so that in the current and the succeeding years, the Seventh Plan targets of development and growth are fulfilled. In this task, the NDC achieved a fair measure of success by evolving broad consensus on the means to restore to agriculture its thrust and primacy in the national economy.

The tone of discussion was set by the Prime Minister himself when he said, "there was no alternative to restoring to agriculture its lost momentum. It is feasible, in the remaining two years of the plan to give a new thrust to agriculture."

Agriculture strategy

The strategy to boost agriculture in the remaining half of the plan centred on the Action Plan for agriculture, prepared by the Planning Commission Task Force at the Prime Minister's direction, aiming to achieve a target of 166 million tonnes of foodgrains in 1988-89, the effort being to surpass the best results achieved in all states in the recent period. In the terminal year of the seventh plan the Action Plan for Agriculture sets the ambitious target of 175 million tonnes of foodgrains. That this is no mean task will be apparent from the latest estimates of foodgains production furnished by the Union Agriculture Minister Mr. Bhajan Lal, Which in the current year are likely to be as low as 134 million tonnes. The impress which the Action Plan bears is being comprehensively worked out, identifying 169

districts in 14 key states for their area of operation. The Action Plan, moreover, dealt with all the ingredient that determined the bid to give a major forward thrust to agricultural production.

The strategy to boost agriculture in the next two and a half years of the Seventh Plan made sense when examined from two other angles. Along with the steep fall in foodgrains production caused by the impact of the drought period. the malignant fall-out showed a weakening of the anti-poverty schemes of the seventh plan. This was a danger signal pointing to the threat to a priority area of Indian planning. Yet another consequential aspect that emerged from the drought's impact was the pressure on prices, the rate of price-rise going up from single to double digit figures, as the Prime Minister noted. The slide back in balance of payments position of the country was yet another aspect to be noted. On these counts too, the strategy endorsed by the NDC was the most appropriate for dealing with these adverse features in the economy, to attack them simultaneously on all three fronts.

Centre-state relations

While evolving a commonly accepted strategy for overcoming growth lags was an important feature of the NDC meeting, inevitably the Centre-State interaction formed another notable aspect of the Council's deliberations. The Sarkaria Commission's findings in relation to Centre-State financial dealings provided a backdrop as became evident from the near unanimity in the demand of the States whether Congress governed or non-Congress ruled ones, for larger financial allocations. In this respect, Maharashtra's S.B. Chavan and Gujarat's Amarsinh Choudhury, did not lag behind West Bengal Chief Minister Jyoti Basu or Karnataka's Ramakrishna Hegde. Similarly, the recent hikes of administered prices by the Centre came in for severe assault by several states, for it was pointed out, that the Centre could have obtained the required revenues through excise duty changes as well. But in that case it would have had to share the additional revenue with States.

It fell to the lot of Shri Joyoti Basu to criticise the Plan strategy as a whole, his thrust being that resurce-raising tilt of the Centre favoured the upper crust of society, the landed gentry and the top industrial barons in particular. Shri Ramakrishna Hegde talked of the mis use of the federal polity by the Centre and cited as instances, what he called the myopic decision on the IMF loan imports of commodities, and defiance of the constitutional safeguards against encrochment into states sphere. Shri Nayannar of Kerala too had a tiff at the Centre for insufficient care against allowing the country to slip into a debt-trap.

These frank and polemical contributions were as per expectations, considering the divergent political hues of which the NDC is composed. They were in fact a healthy sign of uninhibited and open discussion and debate from which alone the NDC could improve its working and output. The overall beneficial output of NDC's proceedings is not in doubt. This is borne out by many commonalities emerging from members of all political hues, One of these was a demand voiced by almost all states relating to the consignment tax. Both the Congress-ruled states and the non-Congress states pointedly stated that the Centre had committed itself to the early introduction of the consignment tax, but had yet to keep its promise. This was taken note of by the Planning Minister Shri Shiv Shankar. □□□

(Courtesy : Spotlight, AIR)

Over 20 m hectares of irrigation potential created

The progressive irrigation potential created under major and medium irrigation schemes, was about 20.3 million hectates from First to the Sixth Five Year Plan. The level of utilisation was 77% of the created potential. The reasons for lag in utilisation included, apart from time needed by farmers to switch over from traditional dry-land farming to irrigated agriculture, indadequate micro-distribution system and no-farm development works. Assessment of potential and utilisation was done by the State Governments. The steps being taken for improving utilisation of irrigation potential included implementation of on-farm development works, such as, provision of field channels, drainage, land shaping, introduction of rotational water supply and introduction of improved water management practices with farmers' participation. □

Second station to be set up in Antarctica

A second permanently manned scientific station is to be set up in Antarctica during the course of the Eighth Indian Scientific Expedition in December-February 1988-89. This station is being set up in an ice-free land area at a distance of 80 kilometres from the present permanent station "Dakshin Gangoti".

The new station will have all the living, working and laboratory facilities. It will be fabricated by Defence Research and Development organisation (DRDO). □

First embryo transfer in India

For the first time in India, a rare experiment of embryo transfer in buffaloes was successfully done by a three-member team from Bulgaria and the experts of the Punjab Agricultural University at Ludhiana on February 12, 1988. The Bulgarian experts were accompanied by 16 donors and 30 recipients. The Bulgarian experts selected 50 buffaloes from the University herd at Ludhiana, from the herd of a private farmer at Village Thamanwal in Ludhiana district and from the buffalo herd of Central Institute of Research on Buffaloes, Nabha. Both the PAU and Bulgarian teams are highly enthusiastic in developing and standardising this technique of immense importance. They have already inseminated 14 buffaloes with sixteen embryos donated by three high-producing dams. □

Highlights of Union Budget 1988-89

Yojana Correspondent

Indirect taxes

* Exemption from excise duty for electric motors used in pumpsets for irrigation. A special programme, Jaldhara, to be launched to assist marginal farmers in drought-prone areas.
* Reduction in customs duty for pesticides and pesticide intermediaries from 105 per cent and 147 per cent to 70 per cent and 60 per cent, ad valoram respectively.
* Full exemption of excise duty for machinery used in agriculture, horticulture, poultry and bee keeping.
* No duty on certain items made by cooperative societies and village industries, viz jams, jellies, fruit juices, pickles, radios, cassettes, tape recorders, footwears etc to promote employment opportunities in rural areas.
* Excise duty on parts and accessories on equipment for cold storage plants reduced from 40 per cent to 15 per cent ad valorum.
* Further reduction of customs duty in respect of 34 specified items of food processing and packaging machinery from 55 per cent to 35 per cent ad valorem.
* Full exemption from excise for domestic electrical appliances for frying pans, water boilers, toasters, automatic irons and stainless steel utensils.
* Total excise duty exemption in respect of formulations and bulk drugs specified in category I of drug control order-intermediates of such drugs also exempt from duty.
* Excise duty on nylon filament yarn used for manfacture of cycle tyres and industrial filter fabrics reduced from Rs. 70 to Rs. 8.13 per kg.
* Excise duty reduced on some types of yarns used in making handloom fabrics and exemption from excise duty for handloom woolen fabrics processed by approved independent processors. Further reduction in excise duty on certain specified textile machinery for modernization of mills from 15 percent to 5 per cent ad valorem.
* Full rebate of excise for tea exported directly from factories; green tea fully exempted from excise duty.
* Laundry and carbolic soaps manufactured in rural cooperatives and khadi and village industries sector fully exempted from excise duty.
* Fire extinguishers exempted from excise duty.
* Concessional rate of 90 per cent customs duty on certain additional equipment required by hotels to promote tourism.
* Special excise duty of one twentieth of basic duty of excise proposed, but essential commodities and other priority items have been exempted from this levy.
* Excise duty on furnace oil and low sulphur heavy stocks increased yielding revenue of Rs. one crore.
* Excise duty on diesel oil produced in Assam and Bihar increased (revenue yield Rs. 9 crore).
* Colour TV sets exceeding 36 cm and assessable value above Rs. 5000 will now have excise duty of Rs. 2000 in place of Rs. 1750.
* Reduction in basic customs duty on LDPE from Rs. 3000 to Rs. 2000 per tonne and on HDPE from 30 per cent to 20 per cent ad valorem.
* Customs duty reduced from Rs. 1000 to Rs. 500 per body of three wheeler rickshaws.
* General reduction in excise duty on cement from Rs. 225 to Rs. 205 per tonne.
* Reduction in excise on paper and paper board made by small paper mills by Rs. 100 per tonne in existing slabs. Mills using agricultural residues will attract duty of Rs. 300 per tonne instead of existing Rs. 800 per tonne.
* Total exemption of excise duty for refined sunflower oil; rebate for use of solvent extracted cotton seed for vanaspati increased from Rs. 3250 to Rs. 4000; increase in rate of rebate from Rs. 320 to Rs. 640 per tonne for use of rice bran oil in soap industry.
* The overall impact of these measures will be an addition of Rs. 545.69 crore to the Exchequer.

Direct taxes

* Rate of standard deduction raised from 30 per cent to 33⅓ per cent of salary income. Ceiling raised from Rs.10000 to Rs. 12000. This will benefit a million tax payers.
* Enhancement of existing tax concessions under Section 80 HHC for export profits so as to exempt 100 per cent of export profits from income tax.
* Five year tax holiday now available for units in free trade zones is being extended to 100 per cent export-oriented units.
* Replantation and rejuvenation subsidies for rubber, coffee and cardamom plantations exempted from income tax.
* Rate of wealth transfer tax would be five times the applicable wealth tax rates.
* Separate exemption upto Rs. 3000 for income from dividends under section 80 L of the income tax Act.
* Subsidy on Janata cloth to be increased from Rs. 2 per sq. Metre to Rs. 2.75 per sq. metre. The impact of this relief will be Rs. 40 crore.
* For construction and purchase of houses, existing concession available under section 80 L has been enhanced.
* Tax on capital gains income by holding company to wholly owned subsidiary.
* Income tax for persons engaged in certain trades like liquor and forest contracts would be collected at source at a reasonably fixed percentage as an anti-evasion measure.
* Changes in income tax payable by LIC have been made.
* Revenue loss of Rs. 201 crore due to direct tax proposals is to be offset by levy of surcharge on income tax and wealth tax to the tune of Rs. 270 crore.

Other highlights

* 'Kutir Jyoti' a new scheme to provide electricity to homes of rural poor. Families below the poverty line will benefit.
* Under a new scheme called the 'Village Abadi Environmental Improvement Scheme', to be implemented through HUDCO, assistance will be provided for improving drainage, sanitation etc., in rural areas.
* Fire Insurance protection to labourers, artisans and other very poor families in rural areas. if their huts and belongings are destroyed by fire. The Government will bear the entire premium cost and relief will be provided through General Insurance Corporation of India.
* 1738 Integrated Child Development Service Projects sanctioned for the most backward rural areas. tribal areas and urban slums in the country.
* To mobilise rural savings, Kisan Vikas Patra is being introduced. Deposits in this will double in five and half years. Facility for encashment after two and half years will also be available.
* For the beneficiaries of the Integrated Rural Development Programme (IRDP), life insurance cover through L.I.C. at Government cost. The insurance cover will be Rs. 3,000 with double benefit in case of accidental death.
* Rate of interest on crop loans upto Rs. 7,500/- reduced by 1½ to 2½ per cent and on loans upto Rs. 15,000/- reduced by one per cent to 2½ per cent.
* Direct finance to agriculture by public sector banks is being raised. Availability of credit to agriculture will increase by Rs. 3, 000 crore in 1988-89.
* There will be a 7½ per cent discount in fertilizer prices. This will bring down the price of a bag of urea by around eight rupees and eighty paise.
* For promotion of rural housing, the Reserve Bank will make a special additional contribution of Rs. 100 crore to the National Housing Bank.
* The role of Land Development Banks to be extended to cover the field of housing finance for farmers. The State Governments to be requested to carry out necessary legislative measures in this regard.
* Under a new programme, HUDCO (Housing and Urban Development Corporation) will provide assistance to small and marginal farmers at 7 per cent concessional interest repayable in 22 years for house building. This facility will also be available for improvement works like change of roof from thatch to tile. ☐☐☐

Sugar production to go up by over 15 lakh tonnes

Government has recommended grant of 19 letters of intent to set up new sugar factories, and permitted 57 factories to expand their capacity involving an annual sugar production of 15.27 lakh tonnes. Inaugurating the Twentyeighth Annual Meeting of the General Body of the National Federation of Cooperative Sugar Factories Ltd., in New Delhi recently ., Shri Sukh Ram, Minister of Food and Civil Supplies said that out of 57 factories recommended for expansion, 25 were in the co-operative sector.

Shri Sukh Ram said that the Government had constituted an inter-Ministerial Group for formulating an incentive scheme to new factories and expansion projects licensed during Seventh Five Year Plan period. He said that the decisions on the recommendations would be considered carefully ☐

Steps to stop destruction of forests

A sum of Rs. 650 crore would be required every year for afforesting an area of about 1.3 million hectares which was depleted every year. The Minister of Environment and Forests, Shri Z.R. Ansari, told the Rajya Sabha, recently that an area of about 1.3 million hectares of forest cover was depleted every year between 1972-75 to 1980-82 according to a survey conducted by the National Remote Sensing Agency. He said that the Central Government was giving financial incentives for setting up of biogas plants, purchase of solar cookers and improved wood burning stoves to reduce consumption of wood. The Government had also provided 100 per cent equity for setting up a corrugated fibre board carton plant for manufacture of fruit packing cases in Himachal Pradesh. ☐

How did Dollar crash affect us

Pramod S. Bhatnagar

The author presents a study of the overall situation in view of the Wall Street's 19th October crash which sent shock-waves to the currency markets the world over. He feels that this worst-ever fall in the dollar price will not only result in a setback to developed countries like Germany and Japan, but also affect economy of developing nations. He feels the Indian stock market is insulated one, so it is not going to be directly affected. He warns that India should be vigilant and take whatever steps it can to ward off the danger, as a result of the worst ever dollar crisis.

IT WAS A DEVASTATING CYCLONE that hit south-east England in October and left behind a trail of broken houses, uprooted trees, mauled parks and insurance claims amounting to £ 500 million. This battering, however, was peanuts when compared with the Wall Street 19 October crash which threw world currency markets into turmoil with shock waves in Japan, Germany, Britain, Hong Kong, Australia and other parts of the world. In Britain alone, the losses since "Black Monday" exceeded £ 135 million. Even a 15-year-old boy lost £ 20,000 in his built up stock worth £ 100,000. The British Chancellor of the Exchequer Mr. Lawson's announcement that the Bank of England will provide a safety-net for the underwriters and would buy back the shares, failed to inspire confidence in the market which is fearing world slump.

Further fall

Last week's White House signal that it is ready to risk a further fall in dollar rather than encourage recession by propping up interest rates threw world currency markets into turmoil. The dollar plunged to new post World War II lows against the Yen and Deutsche and was trading at the lowest in last seven years against most European currencies.

As the dollar continued to tumble West Germany's central bank rolled back short term interest rates to their lowest this year as part of a coordinated international effort. The German Bundesbank fixed a 3.5% rate for its scheduled offering of securities repurchase agreements. Switzerland's central bank also lowered its discount rate by 0.5 point to 3% The Dutch central bank also cut its discount rate by 0.25 point to 4.25%, while British banks cut their base lending rates by 0.5 point to 9%. Ironically, even this rare unanimity in economics failed to halt the dollar crash. Last week, the dollar slid to its fourth second low at 135.50 yen despite heavy market interventions by the Bank of Japan. Market sources in Tokyo estimated that the central bank bought $ 300 million in the morning session alone, on November 6.

Global crisis

The global financial crisis sent even Reagan's friendliest ally, Mrs. Thatcher, jittery. Growing impatient with the US lack of will to cut the huge budget deficits, she criticised American economic policy in the British Parliament. This was preceded by a private message to President Reagan. The crisis infact threatens virtually all she has worked for at home in her eight years as Prime Minister. If the current market horror continues, Britain will be dragged into a worldwide recession.

During the last week, share prices in Tokyo fell and the stock exchange index fell 28.64 points to 1857.07.

Trading volume totaled a very light 450.5 million shares and losses outnumbered gains 790 to 142. In Hong Kong weak US dollar pushed stock prices their year's low and property stocks suffered the worst losses. Prices drifted very low in lackluster trading. Trading volume totaled an anaemic 432.9 million shares.

In Singapore, Kuala Lumpur, Seoul, Taipei and Manila, shares continued to fall and persisted pushing stock prices sharply lower as bearish sentiment over plunges by international quality markets pervaded local trading. In Australia an absence of buying interest pushed the All Ordinaries index down 3.1% to its lowest level in 13 months. Traders took gloomy cues from foreign quality markets against an unstable Australian dollar. Losses outnumbered gains 600 to 99. The index fell 39.5 points to 1250.4.

In Wellington last week, the market fell heavily for the fourth consecutive day and amidst the gloom, the Barclays index fell 92.29 points to 223.60.

Lack of liquidity

Economists all over the world are attributing the steep falls to the lack of liquidity among institutions. There is consensus about restoring stability to the dollar and international cooperation specially between the US, Japan and Germany. There is an all round criticism of lack of will on the part of the USA to adopt practical solution which is producing more, saving more, exporting more and consuming less. In order to set the balance right, the US exports should rise by 25% and imports be slashed by more than 30% thus requiring the spendthrift Americans to behave. On the other hand, the Japanese and the West Germans are alarmed as their export oriented growth is largely due to American purchases The US cuts on imports may have a traumatic effect on their export oriented economies. American economy has not much to bother for exports and imports of raw-materials. The recession may put a halt to the planned expansion in the Japanese and the West German industries.

Impact on developing world

The Wobbling US dollar and imbalances in the developed countries' relative economic strength are being accentrated by worldwide responses to speculative forces. Economic forecasters are not yet clear about what precise impact these conversions will have on the real economy of the developing countries. The fallout of these event could have serious potential for destabilisation of the international economy and for downside risks to developing countries. If the international economy is pushed into the recession, the consequences will indeed be serious for the developing world as there is little margin for the survival of the poor in these countries.

Indian perspective

The Indian stock market is an insulated one in the sense that shares of foreign companies are not quoted or traded on them, foreigners (except NRIs) are not permitted to make portfolio investments and thus operate on market, and shares of Indian companies are not listed or traded abroad. In this sense the price decline on the international stock exchanges should not have a direct impact on the share prices in India. This is borne out by the share price movement on the major exchanges in India. The All India Index was 261.5 on October 19 and the movement for the next few days was as follows:—

Date	Index
22.10.87	260 0
22.10.87	256 7
26.10.87	253 6
27.10.87	247 8
28.10.87	248 9
29.10.87	251 3
30.10.87	252.2

Most of the developing countries like India are now no more under colonial yoke. They can now chalk out new cooperation solutions with concrete measures towards collective self-reliance. The biggest strength of the Asia and Pacific region is its growing market. Even during the period of the 80 s when world economy and trade became sluggish, this region showed a rise in real domestic absorption. The effective market for their goods and services for domestic consumption and investment showed a growth from a base of 100 in 1979 to 130 in 1986.

India's rupee trading system has insulated us against protectionists borrowers in the industrial countries. Our reliance on external resources has been kept to the minimum through a programme of self-reliance. India's corporate sector is not dominated by the transnationals and their subsidiaries. Independent economic development programme has made us self-reliant and India is in a position to withstand the impact of the Wall Street crash.

World recession

However, India cannot remain insulated indefinitely specially if the crash is followed by a world recession. Then the Indian stock market is also not so insulated that it will remain totally immune to the global developments. The impact is more likely to come about indirectly, unlike that on Exchanges which are more inter-linked. Even after a partial or even substantial recovery, stock markets abroad will remain nervous for quite some time. There are fears of a recession in the USA and consequently in many of the developed economies. If this happens and if the US dollar weakens further, the impact would be felt by the Indian economy also, especially in terms of exports. There are nearly 370FERA and ex-FERA companies operating in India and a decline in the fortunes of the foreign company who are partners in these may be felt on the share prices of the Indian companies also. The same may hold true of post-FERA foreign direct investment companies in India. However, fundamentally the share price movement of the Indian companies would depend upon their own performance and one does not anticipate any

(Contd on page 17)

IRS-1A—India's Remote-sensing Satellite

Biman Basu

Multispectral imaging by remote sensing satellite offers a unique method of data collection which can help in exploration of natural resources and land use management. With her own remote-sensing satellite IRS-1A, launched into space from the Soviet Union, India will now be able to make better use of her natural resources.

INDIA IS A VAST COUNTRY richly endowed with abundant natural resources. Yet it faces many problems such as droughts, floods, and crop failures which often hamper development. Often healthy crops fall prey to pests, but the damage is detected too late for any remedial action. Sometimes, rich deposits of valuable minerals and oil lie unexplored for lack of effective ground survey. In recent years, the technique of space-based remote sensing has opened up new possibilities in tackling many of these problems through more reliable data collection. Remote sensing has made more effective management of natural resources possible. With the launching of the first Indian remote sensing satellite IRS-1A in March, India has embarked on remote sensing in a big way. It is now the fifth country, after the USA, USSR, France and Japan to have a fully operational, indigenously built remote sensing satellite in orbit.

IRS-1A was lofted into a polar orbit by a Soviet Vostok rocket from the Baikanour cosmodrome on 17th March, 1988. But the satellite was entirely designed, fabricated and tested by Indian scientists at the Indian Space Research Organisation before being sent for launch to the Soviet Union. Under an agreement India paid an equivalent of US$ 7.5 million to the Soviet Union as cost of the launch. The 950-kg satellite is the first Indian-built satellite to be put into full operational use. The earlier ones—Aryabhata, Bhaskara and Rohini—were all experimental satellites.

Remote sensing

As its name indicates, IRS-1A is a satellite meant for remote sensing, which literally means observation from a distance—observation of the earth from space in this case. In more specific terms, remote sensing refers to the recording and analysis of electromagnetic radiation—visible light, infrared and micro-wave radiation reflected, scattered or radiated from various objects on earth.

Although IRS-1A is the first operational satellite for remote sensing, it is not India's first satellite designed to do the job. Soon after India's first satellite Aryabhata was launched in April 1975, ISRO drew up an ambitious programme for utilization of satellite technology for development.

Bhaskara-I was the first Indian satellite which had TV cameras on board for earth observation. It was launched by a Soviet rocket in June 1979. It sent back more than 1000 pictures before its mission life ended in August 1981. An improved version, Bhaskara-II was launched in November 1981 to continue the studies. Images received from the two Bhaskara satellites enabled Indian space scientists to develop advanced techniques for image processing and interpretation of remote sensing data from satellites.

With the success of the experimental Bhaskara series of satellites, and the experience gained in reception, processing and utilization of data from some of the foreign satellites such as the American LANDSAT and the French SPOT satellites, ISRO embarked on a full-fledged operational remote sensing programme

The mechanism

The IRS system consists of a three-axis-stabilised spacecraft designed for an operational life of three years in a polar sun-synchronous orbit. The satellite has been developed by ISRO under a project approved by Government of India in June 1982.

The objectives

The first objective of the project was to develop and deploy the satellite, carrying near state-of-art multiple solid-state imaging systems in the visible and near infrared bands for acquiring imageries for earth resources applications on an operational basis.

Another objective was to establish and operate ground-based systems for data reception, recording, processing and mission control. The third objective was to use the data from IRS, along with information from other sources, for survey and management of resources in areas like geology, agriculture and hydrology.

The secondary objectives of the project include assessment of specific application potential in survey of agricultural, forestry and water resources, and soil, land-use and geological mapping. The project also envisages building up of indigenous capability in a variety of technologies related to space and ground segments and associated mission support and data product software for a satellite-based remote sensing system

The imaging payoad of IRS-1A constitutes the 'eye' of the satellite. It comprises three special cameras known as Linear Imaging and Self Scanning, or LISS, cameras. Unlike ordinary cameras which use photographic films to record images, the LISS cameras use a solid-state electronic device known as Charge Coupled Device, or CCD in short, to receive the images. CCDs are not only more sensitive than films, but can also directly convert the images into electronic signals for transmission to ground stations.

One of the three cameras of the IRS payload has a resolution of 72.5 metres, that is, objects smaller than this size cannot be distinguished as separate in the final images taken with this camera. The other two cameras are more powerful; they can resolve upto 36.25 m. All the three cameras operate in four spectral bands—three visible and one infrared, chosen to suit various application requirements.

Solar power

Power for its various on-board systems in IRS-1A is provided by two large solar panels which together generate 600 watts. Nickel-cadmium storage batteries provide power when the satellite moves into the earth's shadow during each orbit. The satellite also has on board four spherical tanks filled with liquid hydrazine propellant for 16 small thruster rockets which will be used for periodic orbital corrections.

Indigenous all way

A significant feature of IRS-1A is that most of its on-board systems have been indigenously developed from the expertise and infrastructure built up at ISRO. The systems include the solar panel deployment mechanism, reaction control system, reaction wheels, solar array drive, conical scanning and static earth sensors and the camera payloads. The spacecraft project has been executed with the participation of major ISRO centres and units. A number of Industries, both public and private sector, have also participated in the development of space and ground segments.

Remote sensing satellites are generally deployed in what is known as a polar sun-synchronous orbit which allow them to photograph any part of the earth under similar conditions of solar illumination. This helps in image interpretation because with the same sun angle the shadows cast by different objects will then only be a function of their heights. The orbit is called a polar orbit because the satellite moves in a north-south direction passing over both the poles of the earth. Polar satellites have a great advantage in that they can observe the whole globe in the course of a few revolutions In addition, polar satellites precess, that is, their orbital plane rotates slowly to keep pace with the sun and hence they are called sun-synchronous.

IRS-1A has been put in a polar sun-synchronous orbit at an altitude of 904 km and with a period of roughly 103 minutes. Every day, it passes over the Indian landmass seven to eight times and each pass lasts from five to ten minutes. With this kind of an orbit, the satellite passes over the same spot on earth once every 22 days. This orbit also ensures that the satellite crosses the equator every day at precisely the same time for identical sun angle. For IRS-1A this is fixed at around 10 a.m.

What it will achieve

During each pass over the subcontinent, the satellite instruments gather information on agriculture, forestry, geology, coastal features and hydrology. This information is directly conveyed by telemetry down to the data receiving stations in Hyderabad and recorded on digital tapes after necessary corrections to account for atmospheric and other aberrations. According to ISRO scientists, the data sent down during each pass is equivalent to some 4000 volumes of 300 pages each, that is, roughly a good-sized library of about 10,000 books every day!

Remote sensing images from IRS-1A are received by earth stations on ground as coded signals. After they are received, the signals are decoded and converted into

black and white or colour pictures. Computers are used to increase tonal contrast for the best results. The pictures so produced are far more revealing than those obtained by single-image photography.

A unique advantage of multispectral space photography is the provision of 'colour coding' the images by computer for easy interpretation. Subtle differences in absorption characteristics can be enhanced by this technique. For example, the data may be used to produce a detailed map of crops under cultivation that shows cotton in red, wheat in yellow and fallow land in blue. Potential water resources can be similarly colour coded to assess their viability.

The main data reception station for IRS-1A is located at Shadnagar in Hyderabad and the data products generation facilities are located at Balanagar, also in Hyderabad. The software for data processing and data products generation have been developed at ISRO's Space Application Centre, Ahmedabad. The SAC is also responsible for data quality evaluation and feedback to mission control centre located at Bangalore. Five regional remote sensing service centres have been set up at Bangalore, Dehradun, Jodhpur, Kharagpur and Nagpur to receive imageries and data from the satellite. A central management office, set up at the ISRO Headquarters, is coordinating all the activities connected with the running of the regional centres. Together, these centres will ultimately constitute India's National Natural Resources Management System (NNRMS) of which the IRS programme is a key element.

There are several application areas in which the IRS-1A data are expected to be used. Notable among them are groundwater exploration, land use mapping including mapping of forest areas, and flood-prone areas, inventory of surface water bodies and regional geological mapping. With increasing demand for remote sensing in the country, new applications for monitoring and planned utilisation of natural resources are likely to evolve.

Agriculture, the beneficiary

The biggest impact of IRS-1A data utilization is likely to be in the agricultural sector. Past experience has shown that remote sensing data can reveal insect damage to certain crops even before the farmer on the field becomes aware of it so that corrective action can be taken in time to save the crop. Results of controlled experiments on wheat have shown that remote sensing data can be used to detect lack of water or nutrients in the growing crop. IRS data will also enable more accurate estimation of crop yields possible.

The IRS-1A is the first of a series of operational remote sensing satellites to be built by ISRO in the coming years. Although the emphasis at present is on land based application, in future the data will also be used for certain marine sources related to coastal ment applications. According to the present plans ISRO will orbit a new IRS-type satellite once every 30 months. The first two, including IRS-1A, would use Soviet launchers, but the third and subsequent ones are expected to be launched by Indian Polar Satellite Launch Vehicles (PSLV) now under development at ISRO. □□□

(Contd from page 14)

major impact even if the parent company suffers losses abroad. This is because despite the attractiveness of FERA companies' shares and the high investor preference enjoyed by them, the true market leaders in India like TISCO, Reliance, Century etc., are India owned and controlled. Predominantly export oriented companies in India do not constitute significant segment on our stock exchanges and thus a decline in their performance may not pull down the overall index. Far more relevant in our case would be the domestic factor.

Indirect impact

Despite the unlikelihood of any direct impact, one cannot entirely discount the possibility of some impact on the Indian stock markets if the global stock markets continue to undergo serious problems. This is because of the impact of such events on the market sentiments, and if this happens in conjection with some other negative development, then such global upheavals could become the trigger points for problems in Indian market. In other words by themselves the 500 point decline in Dow Jones may not have had any corresponding decline on the Bombay Stock Exchange, Index of New York Stock Exchange, but a similar, or may be a smaller decline coming at a time when other problems may be perceived by our investors would have an impact. This warrants a continued watch on the situation and taking of active measures to the extent possible.

One aspect of some relevance to the recent developments is the existence now of an India Fund abroad, listed on the London Stock Exchange, and the prospects for such Fund and for NRI investments in India. Various country Funds have also declined on the international stock exchanges, but the decline in the price of the share of the India Fund was relatively less. and certainly far less than the sharp decline in many equities. This presumably reflects the assessment of the overseas markets that the insulated Indian stock markets are not likely to be affected at all, or significantly by the crash. It is also possible that the non-resident Indians who may have lost in speculative or even non-speculative investments on the markets abroad may now look to the Indian market more positively. It is felt that this may not be apparent in terms of any major inflow of Funds, but there would be a small change in the attitude. If our own markets show some continued bouyancy, then even the inflows can be expected to increase. □□□

May Day Special

Female rural working force needs a better deal

Kumari Jyotsna

The profile of rural working women in India is a discouraging one owing to gross discrimination both in employment and wages, lack of dignified work, lack of adequate training and lack of awareness of their rights. This pathetic situation calls for immediate corrective measures so that the potential of the female work force is properly tapped and utilised for rural upliftment Improved adult education, diversification of engagement of female work force, development of dignified work areas and adequate training are some of the measures suggested by the author, towards attainment of this goal.

WOMEN PLAY AN IMPORTANT ROLE in economic development in rural areas where all economic activities involve women in some way or other Besides spending 10-12 hours daily in household activities, they contribute, in an important way, to agricultural production, animal husbandary and other related activities like storage, marketing of produce, food processing etc. The household pursuits include a number of activities like cooking, nurturing, cleaning, collecting of firewood, sewing, tailoring, teaching, washing etc. Women, thus, work harder and for far longer hours than men and supplement the family income in a big way. It has been estimated that the value of unpaid household works done by women constitutes 25-39 per cent of the total gross national product in developing countries. They are responsible for 60-70 per cent of agricultural operations. They, being a real symbol of dedication patience and sacrifice, are, however, usually taken as 'nurturer' and it is only in recent years that some attention has come to be focussed on women as workers in the economic sense of the term. This may be owing to the fact that majority of the rural women, about 54 per cent, are engaged in marginal occupations. About half of the working rural women are unpaid helpers in family farms and allied activities. Their participation in economic or gainful activities is low and they are still to be fully integrated with economic development

A discouraging profile

The profile of working women in rural areas is discouraging one Though the female work participation rate has shown an increasing trend over the years it is still far below the male work participation rate. The female work participation rate in rural areas is only 16.49 per cent as against 52.21 per cent in case of male It varies substantially over states from as low as 3.09 per cent in Punjab to 40.83 per cent in Nagaland. As high as 86.43 per cent of the rural female work force is engaged in agricultural and allied activities. The women's employment in rural areas has not shown a satisfactory change over the years as there has been increase in the proportion of female agricultural labourers. There is a further declining trend in women's employment due to technological advancement. Women get limited job opportunities in modern occupation as they do not have access to the training required for new technologies. This discouraging profile of working women is made even gloomier by the acute unemployment and under-employment prevalent among them. Whereas 51.23 per cent of male population is employed in the country, employment in the case of women is only 14.44 per cent. Women constitute about 33 per cent of the total labour force in the country, they, however, account for 40 per cent of the total unemployment. Not only women employment is subdued by male employment, rather women are also discriminated. The average earning of regular

salaried woman worker is less than that of man. The discrimination is severe in unorganised sector, the worst sufferer being the women labourers. It has been estimated that the wages of female labourers are 40 per cent less than those of men. The women workers in rural India are taken for a ride because of their illiteracy. Further, in the fields of mining, plantation and industry, employers seem to be reluctant to employ women because of the various protective laws which involve extra expenses for them.

The survey and its findings

This paper makes an attempt to put some aspects of female employment to empirical verification. The analysis is based on the primary data collected through a survey of chosen households in a village of North Bihar.

The village selected for the survey, Ali Neora is some 14 Kms. away from the district headquarters at Muzaffarpur, an important commercial town in north Bihar. The village is linked to Muzaffarpur with a metalled road. This flood prone village consists of a total of 509 all agricultural households. As high as 71 per cent of them are marginal farmers. The land of the village is usually double-cropped, the third crop being not possible due to floods. There is no industry in the village, a common characteristic in north Bihar.

The total households of the village have been stratified on the basis of land holding and then from each strata 20 per cent households were chosen at random for intensive study with the help of a structured questionnaire. Altogether 113 households were included in the sample. The major findings of the study are:

The working force in rural areas usually comes from backward and scheduled castes and as such distribution of population assumes significance. Table 1 gives the distribution of population by sex and caste. The caste-wise distribution of population is quite skewed in favour of backward castes which account for 58.20 per cent of the total population. The scheduled castes account for 18.83 per cent of the population whereas forward castes constitute 11.55 per cent of the population. Women in the working age group constitute about 28 per cent of the total population. The percentage is almost same for different castes of the society. So far as education is concerned, women are almost neglected. As high as 96.43 per cent of the female population is illiterate (Table 2), whereas only 63.93 per cent of male population is illiterate. The percentage of illiteracy is also very high (92.50) amongst female children showing that discrimination against female in respect of education would continue to stay.

It has been found during the survey that respondents were not so willing to report about the working women in their families. They appeared to have taken it against their dignity that they make the women of their family work. This is what one may expect in a well-to-do family. It is also found in an upper caste family. However, it is significant that it was reported in poor and backward caste families. This shows that working of women in the agricultural activities is taken lowly and against dignity. It is only under compulsion that one makes women of one's family work either on own farm or on other farms. That's why the female work participation rate in the reporting village is very low. Whereas 94.98 per cent of the male population in the working age group is engaged in some work or other, the work participation rate in the case of female is as low as 8.67 per cent (Table 3). Of the total of 196 female population in the working age group only 17 were reported to be engaged in economic pursuits. The remaining women were reported to be engaged exculsively in household activities and enjoying a good deal of leisure. The female work participation rate is 6.42 per cent for the district of Muzaffarpur and 8.88 per cent for Bihar as a whole. The findings of the Study are thus, not contrary to the fact.

The working women are mostly agricultural labourers. As high as 88.24 per cent of the female working force was reported to be working as agricultural labourers (Table 3). They mostly belong to the Muslim and scheduled caste families. Out of 17 working women, one woman was reported to be cultivator and another engaged in business. In case of male working force, the percentage of agricultural labourer is 43.75. Obviously women are not placed satisfactorily on the work front and they are shadowed by men. The engagement of male working force is well diversified. The working condition in rural areas also goes against women as compared to men. A comparison may be made between the working conditions of male labourer and female labourer in agricultural activities. It may be observed from Table 4 that male workers are able to get jobs for 8 hours on average, whereas female workers are provided with jobs for 5 hours on average; whereas male workers are engaged for 20-25 days a month, female workers get jobs for only 10 days a month on an average. It shows that female workers remain unemployed for most part of the year. Further, they are engaged in light agricultural activities such as weeding, picking up ripe crops, harvesting etc. Obviously, they are underutilized. Further, women workers are reported to be grossly under-paid. The average wage for the male workers in the agricultural activities works out to Rs. 8 whereas it is only Rs.4 in the case of female workers. Obviously, women workers are discriminated against in respect of wage payment as compared to male workers showing the enforcement of the Equal Remuneration Act infructuous. This finding is in conformity with what was observed by the Second National Conference on Women's Studies held in Trivandrum from 9 to 12 April 1984. The male workers are also engaged in a big way in non-agricultural activities where they earn Rs. 15-20 on an average. This is indeed a sad commentary on the working conditions of the women in rural areas. The profile of the working condition of women in rural areas would appear gloomier if one considers the fact they are unable to get the benefits of labour welfare legislations either.

From above, it may be derived that female work force is mostly confined to household drudgery in rural areas

and only a small fraction is engaged in gainful activites. That women as manager of households significantly contribute to economic development cannot be denied, their role as 'worker' is not so encouraging. That this phenomenon is obvious in other villages of north Bihar is a matter of common experience. The engagement pattern of female workers is quite concentrated. In the absence of alternative opportunities, female workers reluctantly work as agricultural labourers. It is possible that given the somewhat superior jobs in non-agricultural activities, female work participation rate may improve substantially. The rural women have sufficient time at their disposal and they are reluctant to go for work because works available for them are not of their choice. Working in the agricultural activities is not taken as dignified. The working condition of rural women is not satisfactory because of sex discrimination and their poor bargaining power. Because of widespread illiterary, female workers are subject to a number of common devices that categorise work into different grades for the purpose of legitimising unequal wages.

Women need dignified work

The female work force, in rural areas is vastly untapped on the one hand and the working women are facing discrimination and unfavourable working condition on the other. The female work participation rate will improve if women workers are provided with works that may be taken as dignified. This requires that alternate employment opportunities be created by developing small and cottage industries and handicrafts. Development of small and cottage industries and handicrafts to supplement agriculture should be pursued in such a way that it ensures jobs that women find acceptable and take them during their spare hours. They may be given more employment opportunities in the scheme of public distribution system, rural godowns, dairy development and social forestry; modernisation of traditional occupations of women such as spinning and weaving, match box making etc. would also provide employment opportunities for women.

Training

Appropriate steps should be taken to develop the professional and technical skill among rural women. They should also be provided with opportunities for self-employment and entrepreneurship. Facilities of getting credit and essential raw materials should be made available. Opportunities of self-employment would provide work for women in spare hours. Establishment of highly labour intensive and technically simple industries like bidi making and preparation of certain types of small processed food delicacies like papad, badiyan, sev etc. would bring about a substantial increase in the job opportunities for rural women. As a result, engagement of female work force would get diversified and economic development would get a substantial increase. This would help accelerate the economic independence and improve the status of women.

Conclusion

It is against the spirit of the Indian Constitution and the labour legislation that female workers are discriminated against on the work front. This practice must be checked by effective enforcement of the Equal Remuneration Act.

In order to make improvement in the working conditions of women in rural areas, their interests should be protected by labour welfare legislations that are benefitting female workers in industrial and other fields.

Women get limited job opportunities in modern occupations as they do not have access to the training required for new technologies. Attempt should be made to remove this hindrance. Efforts made in the form of TRYSEM should be strengthened. An increasing use of science and technology should be made in order to acquaint women with modern tools and technologies on the one hand and to reduce their drudgery and save time for improving knowledge and skill.

With special emphasis on adult education for women and through mass communication media, women should be made aware of their own potential for development and also of their rights and privileges. Such awareness will help them fight against exploitation.

The female work force being a substantial portion of the total work force can contribute in a big way to economic development in rural areas if it is properly channelised and utilised.

(Contd on page 29)

Table 1

Distribution of population by sex and caste

Category	*Caste*				
	Forward	*Backward*	*Muslim*	*Scheduled Castes*	*Total*
Male	26 (32.10)	125 (30.64)	25 (31.25)	93 (32.58)	219 (31.24)
Female	23 (28.40)	109 (26.71)	24 (30.00)	40 (30.30)	196 (27.96)
Child	32 (39 50)	174 (42.65)	31 (38.75)	49 (37.12)	286 (40.80)
	81 (100)	408 (100)	80 (100)	132 (100)	701 (100)

Drugs—turning good into evil

Dr.N.S. Chandran

Problem of drug abuse in the country has assumed alarming proportions particularly in the metropolitan cities. Terrorists have been found involved in drug-trafficking and peddling to earn easy money to finance their activities. It is a lucrative business, says the author, since drugs fetch 50 times more price than gold. Here he gives an account of various source material like herbs and plants from which these killer drugs are obtained.

AMRIT (NECTAR) IS THE IMMORTALISING celestial drink. Too much of even that will work like killer poisons, says an old sanskrit saying. About drugs too this is the simple truth.

Hippocrates to Charaka to Susruta, various great teachers in different parts of the world used herbs to alleviate pain, and curing diseases. Gradually they got real than life place in phantasgamoria. And with it began the process of perverting good into bad and things used as life-savers soon became life destroyers.

Cocoplant, considered magical is said to have given the Red Indians wonderful power of endurance when they chewed its leaves. The leaves contain cocaine, which deadens pain. It was one of the earliest anaesthetics used by dentists. Morphine, which is used to remove severe pain, originally come from poppy seeds. Digitalis, which is used to treat heart disease, was made from the foxglove. Quinine used to be made from the bark of the cinchona tree, Common in Peru and Amazon region, was used in the treatment of Malaria. From castor beans comes castor oil, a powerful laxative. More recently drugs used in the treatment of certain kinds of cancer have been found in the periwinkle.

Some drugs have been prepared by extraction from organs of animals. Extracts of thethyroid were used to cure some thyroid disease. Insulin, used to treat diabetes, is from animal pancreas.

Sulphanamide group

Sulphanamide group of drugs are developed from the dye industry. Infections are now treated with antibiotics many of which are prepared by extraction from moulds. Other drugs are made from minerals.

Some drugs have powerful effects on the mind causing either dreamy or highly excitable condition which some people find pleasurable This is true of a number of drugs, Many of them from plants-heroin, morphine, opcaine and cannabis belong to this group. Drugs of the cannabis group come from various varieties of hemp plants, and include hashish, marijuana and bhang. Other drugs such as LSD (Lysergic acid diethylamide) are made in a laboratory by chemical synthesis.

Drugs taking is suicidal. Some drugs can cause abnormal and dangerous hallucinations. Others lead to addiction—a condition where a person cannot live without the drug he uses. He may become seriously ill when deprived of it. Drug addicts often die young because of the damaging side effects.

Narcotics

We use the word 'narcotic' for a number of drugs that seem to make people feel better for a short period but that are very dangerous and illegal. A person who uses narcotics regularly will usually become an addict and cannot rid himself of the habit. He becomes addicted. An addict comes to depend so much on the drug that he will kill to get it.

Narcotics are often called "dope" or simply "drugs". Strictly speaking a narcotic is a drug that produces "narcosis", a condition in which a person loses most or all of his power of feeling and may lose consciousness. However there are other drugs that produce the opposite effect-make a person more wide awake than ever-and some of these drugs also are called narcotics. Both are equally evil.

Youngsters are particularly vulnerable to drug addiction. Peddlers big, medium and small entice them in all possible ways Once they become addicts, peddlers make them and come to their tunes by threatening to or, by cutting off supplies altogether to them.

Habit forming drugs

A person can be addicted in two ways. Certain narcotics cause bodily addiction. This means that the victims body will become dependent on the narcotics, and he may suffer great physical agony without it. Gradually the victim's body builds up a tolerance of the drug. Consequently he will need more and more of it. Since every narcotic is poisonous, an addict of this kind will soon die unless he can be taken to a proper treatment center and cured. These drugs come from opium which comes from poppy. Opium derived drugs are called opiates. One of them is morphine, the pain killer. Another is heroin.Codeine, used in many cough medicines, is another. It is not quite as habit forming as morphine or heroin, but it is still dangerous and has the potential to become habit forming.

Habit forming drugs are taken from the coca plant. Cocaine is a coco derivative. Cocaine was once used in many medicines and consequently many people became addicted without knowing what was happening to them. Now safe substitutes have been found.

The other kind of addiction is mental. Some drugs are said not to be habit forming, because a person's body does not suffer when he cannot get the drug, but a mental habit can be almost as bad. For example, marijuna does not build up a tolerance in the body, but a person who is used to it will often have an uncontrolable desire for it if he cannot get it. In the same way an alcoholic has an uncontrollable desire for liquor. But it is not habit forming. Such an uncontrollable desire can lead to crime or ruin life or career for ever.

Two Types

Narcotics may be either stimulants or depressants. A stimulant steps up all activities of the human body. Heart beats faster, lungs take in air faster, he feels stronger. If he is tired, the feeling passes. If he was unhappy he may feel happy, and vice versa also. Cocaine is a stimulant. So is benzedrine, which is much less dangerous. A depressant slows down bodily activities. A person who has taken a depressant feels calm and relaxed. If the drug is strong enough, he sleeps. Most of the opiates, such as morphine and heroin, and the barbiturates are depressants.

Opiates

Opium, from the poppy plant, is pressed in to a pill that can be smoked. It puts the person to sleep. Morphine and heroine (diamorphine) are usually injected into veins with a hypodermic needle. They are very strong and anything but a tiny dose will but a person to sleep, unless his body has built up tolerance to it. Opium was believed to be the main reason for the collapse of imperialistic China. Opium war may be remembered in this connection. Heroin is used by most addicts because it is about four times as strong as morphine. These drugs come in the form of a white powder that looks like sugar. It is dissolved in water for an injection, but some addicts sniff it up the nose, much as tobacco sniff is taken.

Marijuana

Marijuana is a form of cannabis, a derivative of hemp plant. In the United States the leaves are dried and smoked in cigarettes called "reefers'. Its smoke is very sharp and must be taken in small puff. Smoking marijuana makes a person feel exhilirated. He may feel drowsy and fall asleep. Part of the danger of smoking marijuana is it leads to taking more dangerous drugs. Smokers usually say they are not going to make it a habit. But sooner or later most of them do.

In some countries hemp is used to make hashish, a cake of resin taken from the plant. This can be chewed and swallowed for narcotic effect. It often makes a person dangerous by aggresives.

Barbiturates

Millions of people have taken barbiturates in sleeping pills—They are sedatives, drugs that quiet the nerves and permit a person to go to sleep when he is worried or suffering from mild pain. They are habit forming, and a person who develops a tolerance for them is forced to take more. They suffer a great torture as a person who is addicted to morphine and cannot get it. Some addicts take harbiturates by intra-venous injection and this causes infections or ulcers on the skin. It may also cause heart disease. Now it has been identified as a major cause of AIDS.

Treatment

Any dependence on narcotics or on any stimulants or depressants, is now treated as an illness. Treatment is possible only in hospitals or deaddiction centres that are specially equipped. Through de-addication it is aimed

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Measures against drug trafficking

Joydeep Gupta

The heads of drug enforcement agencies from most European countries and the Indian subcontinent gathered in New Delhi on March 15, 1988 at the invitation of the Central Bureau of Investigation. The conference, essentially to discuss ways on how to improve cooperation between the police forces of various countries when it came to combating drug smugglers, was the first ever conference of its kind held under the auspices of the International Crime Prevention Organisation, better known as INTERPOL. The author here gives a brief account of the deliberations and outcome of the conference.

NOW, EVERYONE KNOWS that drug smuggling is perhaps the largest illegal business in the world today. Everyone also knows that India occupies a strategic position in the routes of all international drug smugglers. It is situated between the two areas of the world where most of the opium poppy, from which heroin is distilled, is grown. The areas are known as the Golden Triangle and the Golden Crescent. Naturally, the amount of drugs seized all over Europe which had either originated from or been obtained in India had been showing a sharp rise till the mid-eighties. It was after that the Government of India started making concerted efforts to check drug smuggling. These efforts have already shown good results. The proportion of drugs originating from India and seized in Europe have shown steady fall over the last three years. But the European countries, with their highly mechanized system of policing, still hold a feeling that India was not doing as much as it could. Actually what was happening was that given the system of keeping police records in India in its traditional manual form, the information was not reaching the counterparts in Europe. The representatives of the 145 member countries of Interpol meet once a year, but it is too big a gathering to take up many specific narrow issues. So the explanation of India's position, its commitment to curb drug smuggling, and its willingness to improve cooperation with all countries for this purpose has been missing by default, not design.

The Interpol Secretary General, Mr. R.E. Kendall probably realized this after the last General Assembly of the organization took place in Nice, France, in November 1987. He wrote to the CBI Director General, Mr. Mohan Katre suggesting a joint meeting of heads of drug enforcement agencies from Europe and India in New Delhi, so that the air could be cleared and the degree of cooperation improved.

The source

The CBI of course, agreed and it had another reason for doing so. For quite a few months now, the Government of India has been receiving reports that various heads of drug enforcement agencies of Pakistan have been saying at various international meets that the drug smuggling problem was so great in the world today because India was not taking enough interest in curbing it. The fact is, however that almost all the heroin that comes into India now-a-days comes through Pakistan, and has its origin either in Afghanistan or the North West Frontier Province of Pakistan.

The dirty nexus

India wanted the Europeans to appreciate this point as well. The scope of the meeting was therefore increased by including all countries of the subcontinent into it. As it happened at the meeting, the Europeans had probably their first look at photographs of how acres after acres of illegal poppy fields still flourished in the North West Frontier Province of Pakistan-(NWFP) today, despite the Government's efforts to eradicate them. On its part, there were a few home truths about the menace of drug smuggling that India wanted to bring to the noticc of the delegates. The first was the nexus between drug smuggling and other forms of crime, like terrorism. It is by now well known that a large quantity of drugs cross the Indo-Pak border now-a-days through corridors where the terrorists hold sway, and the drug smugglers are allowed in because they bring arms and ammunition for their protectors from Pakistan. The drug problem surely cannot be seen in isolation, and it is to the credit of Indian delegates at the meeting that they convinced everybody present on this crucial point.

The recriminations

Then, just as Europeans have some grouses against India on the drug smuggling question, so do Indians have some against the Europeans. The main one being the way money collected by the drug smugglers is freely invested in other legal and illegal activities by them in various European countries. The law enforcement agencies in these European countries are able to do virtually nothing in these cases due to the prevalent laws on commercial confidentiality or banking secrecy. The European police chiefs really had no answer when the Indian delegates talked about this at the meeting, knowing as they do, that their chances of pushing through any legislation that changes these essential concepts in any way is pretty grim. Still, they promised to do their best to see to it that the proceeds of drug smuggling are seized and the kingpins are not allowed to enjoy the fruits of their criminal labour.

The achievements

Once the air was cleared on all points, it was time to get down to specific areas of increased cooperation among the participating countries. And here the New Delhi meet achieved much.

Firstly, it was decided that the national coordination bureau which Interpol had in each country would be strengthened so that it could handle its job of being a clearing house of information much more efficiently. Once this was done, the police forces of each country would immediately provide the NCB concerned whatever information or intelligence they gathered in the area of international drug smuggling. The NCB would transmit the information immediately to the Interpol headquarters in Paris, which would in turn spread the information to all the countries concerned through their NCBs.

The meeting also hoped that bilateral agreements to curb drug smuggling, wherever they existed, would be implemented better and strengthened to bring all the aspects of drug smuggling and related crimes under its ambit.

A third and major thing that the participating countries decided to do at the meeting was to use decoy drug couriers at international levels. Earlier, the utility of a decoy courier was much reduced because the moment he went to another country where the police force had not been informed about him, he would be arrested, and that was that. Another courier was caught and the police got nowhere near the ring-leaders.

Methodology

Now, under the new agreement, the police forces, previously informed, would allow the decoy to pass through their fingers, monitoring his movements and that of everybody who met him from the point he obtained the illegal cargo to the point where he disposed of it and was paid his share of the loot. This, it is hoped, would help the police get to the ring-leaders among drug smugglers much more easily, and surely marks a watershed in international police cooperation. Policemen are innately suspicious of everybody, including members of their own tribe. But the atmosphere of mutual goodwill in which the three-day meeing in New Delhi ended surely bodes ill for international drug smugglers, and well for millions who would otherwise fall prey to the pernicious menace of drug abuse. □□□

(Courtesy : Spotlight AIR)

India to help Bahrain in fisheries development

Bahrain has sought India's assistance in developing fish farming and pearl oyster culture in their country. The Bahrain Minister of Development and Industry, H.E. Mr. Yusuf Ahmed Sirawi, who called on the Minister of Agriculture, Shri Bhajan Lal in New Delhi on February 23, 1988 suggested that colloboration between the two countries for the development of fish farming on both commercial and technical basis could be considered.

The Bhrain Minister said his country would be gload to have Indian experts and there could also be technology transfer through the Research Council of Bahrain. In response Shri Bhajan Lal assured him that India would be willing to offer whatever expartise it could in developing shrimp farming in Bahrain. Indian experts were already assisting Bahrain in oyster culture and more experts could be provided if Bahrain required them. India would also be able to supply them as much of farm products like poultry, vegetables and fruits as well as mtton, as required by Bahrain which imports 94 per cent of its food requirements.

Fighting drug abuse

Uma Joshi

Day in and day out cases of drug trafficking and drug abuse have been coming to light, particularly in the metropolitan areas of the country. Present estimates show that as many as 15 million people would become drug addicts as India enters the 21st century if drug abuse is not effectively controlled. Drug addiction, the author here says, has now reached the higher echelons of society along with the lower strata of people, including children.

COMBATING ILLICIT DRUG TRAFFICKING ıd its concomitant, drug abuse, has become a major ternational problem that cuts across political and ographical barriers. India, for long regarded as a mere ansit point, is no longer just that. There is evidence at a large part of the processing of opium into the fferent stages of heorin is now taking place in this untry. There is a growing American and Italian mafia nnection with the principal Indian organisers of the ide. As such, for controlling the menace there is an gent need for a closer international cooperation tween specialised national agencies and an all-out sault by the police. Since the profits involved in the ide are so huge, corruption related to drugs gets apidly institutionalised with the police force itself. espite the frenzied expressions of 'concern over the seriousness of the problem', drug addiction continues to grow at a mind boggling pace. So far, no effective counter machinery has been created to control this social malignancy.

Effective check

The Government must, therefore, deal with an iron hand against corrupt people in the enforcement agencies. Unfortunately, our apathetic attitude towards prevention and control of drug addiction in the country is depressing and it makes nonsense of our living in a social welfare state. Today's youth addicted to drugs is not only losing all vitality but drug addiction is also posing a grave threat for future generations. It is no exaggeration to say that now the craze for drugs (hashish, charas, marijuana potgrass, heroin, LSD, cocaine, barbiturates, methidrine and so on) has spread to almost all sections of the society. Almost every day there is some news of illegal import or export of drugs into and out of the country.

The drug syndrome has caught on the youth, particularly amongst the student community in urban areas, first out of curiosity and then becoming a fashion or habit. Therefore, there has to be concentrated effort to highlight the evils of such addiction and combat the false glamour that has come to attach to it. This is vital because it is the relatively affluent, 'westernised' youngsters who are getting hooked in growing numbers. But even the best efforts in this respect will come to naught if the drug trade itself is not sharply curbed. This is one area in which Say's Law holds-supply generates its own demand, and the greater the supply, the higher is the local demand. In the long run, it is the second aspect that would be most frightening.

Why efforts fail

It may be recalled that a new organisation called Narcotics Control Bureau was set up in July, 1986 for effective coordination of action against illicit traffic in drugs. Earlier, on April 29, 1985 the Parliament passed the all-inclusive Narcotics Drugs and Psychotropic Substances Act amending a whole series of the hopelessly outdated laws existing then. Under this law, the minimum punishment for trafficking is rigorous imprisonment for 10 years (with repeat offences inviting punishment of upto 30 years) while the fine ranges between Rs. 1.5 and 3 lakhs for illegal production, manufacture, possession, sale, purchase, transport and import or export of narcotic drugs and psychotropic substances. However, experience has shown that the accused persons get away on the basis of certain pretexts which serve as the loophloes in the present legislation. The deterrent aspect of punishment has not discouraged the concerned persons. The wide powers given to the Central and State enforcement agencies to conduct raids, detain suspects and afrest the offenders have not been helpful in driving home the message to drug peddlers and smugglers that the risk involved in their operation is now far outweighing the benefits. Meanwhile, the administration is yet to take stringent action against them.

India is one of the few countries permitted to produce opium for export purposes. But the challenge to its exports was now coming from such countries as the United States and Turkey. The area under opium production has come down in the country from 25,600 hectares in 1977 to 10,000 hectares at present. Opium production is fully controlled and no one can produce it without a licence. Also, the entire production has to be sold to the government. Officially, India grew 995 tonnes of opium per annum from 31,359 hectares under poppy cultivation in Uttar Pradesh, Rajasthan and Madhya Pradesh. A lot more is grown illegally. Uttar Pradesh alone accounts for 45,000 kg of excess cultivation. The street value of opium converted to morphine and heroin in international market is said to be 20 times that of value in India. Today, Afghanistan and Pakistan have become the most important conduits for trade in opium and as a result, smuggling into India (in transit to the west) has increased manifold

Why drug addiction

According to medical experts, many attempts have been made to define factors responsible for driving a person to become a drug addict. Some of the studies have shown a variety of motives for drug dependence. Case history analysis compiled by top medical experts has indicated that many people started using drugs for pleasure, while others consumed drugs such as smack for a sense of adventure. Wish for self-knowledge, desire to escape, dejection as a result of medical treatment of diseases, unwillingness to accept minimum discomfort and social and psychological maladjustment have been found to be some of the other reasons which have driven many young people to this social evil.

Besides, environmental factors are also, to some extent, responsible for drug dependence. Rapid technological developments with the associated need for extended periods of education, inapplicability of old solution to modern problems, television, world travel and affluence are other factors, which are responsible for drug addiction. Young people rejecting the cultural and soical values due to rapid technological developments, drug trafficking by a small group of anti-social and criminal sub-cultures and the neglect of children by parents are some of the other reasons for this soical evil which has wrecked many homes and lives of young people. Long use of these drugs with large doses resulted in psychic dependence. It has been found that experience, the 'kick', or just for the sake of company. For some, it is an expression of revolt against traditional norms and values. The researchers say that hardly any of the students using narcotics realised the implications which would make their life an agony and totally unproductive.

Need for integrated policy

There is now an urgent need to formulate an integrated and comprehensive prevention policy which would envisage coordinated effort of anti-narcotics, intelligence revenue, police and medical agencies. In fact, the problem of drug abuse could be tackled only through a holistic three-pronged strategy. First, the focus should be on social, economic, political, cultural and medical factors that breed drug habits. Secondly, preventive approach should be directed at early detection of drug habit and social deviant behaviour in a collaborative effort involving the community, family, police and voluntary agencies. Lastly, there should be direct intervention programme for detoxification, rehabilitation and reintegration of the drug addicts. Now it is for the government and our social organisations to take a bold step in curbing the evil so that ultimately it is totally wiped out as otherwise the coming generations of youth population will become physically and mentallv defective.

Retrieving drug addicts

There is also the need to fight the malaise at the soical level because the laws alone would not be sufficient to meet the challenge. The government has launched a scheme to deaddict the victims of narcotics. A welfare fund has been set up to help the families of those officers who might die while discharging their duties. While the government is intensifying the preventive measures and modernise the equipment of officers entrusted with curbing drug peddling, computers will also be used to detect the smugglers and illegal operators in drugs and narcotics. The infrastructure for the detection and treatment of drug addicts, which is still at a rudimentary stage in the country, has to be strengthened vastlv to wean away the victims who come from all strata of society, with students forming the bulk in metropolitan cities.

(Contd on page 29)

Consumers, beware of these traders !

R.B. L. Garg

Quality goods at a fair price and in right quantity are the fundamental rights of every consumer. In most cases, the unscrupulous traders openly flout these rights. The Government has carried out necessary amendments in the Monopolies and Restrictive Trade Practices Act with a view to protecting the interests of the consumers. The author here feels that the consumers will have to take initiative to know their rights and save themselves from the nefarious designs of these unscrupulous traders.

QUALITY GOODS AT A FAIR PRICE and in right quantity and clean environment are the fundamental rights of every citizen whether of a developing economy or a developed world. In most cases, however, these rights are infringed upon by the unscrupulous traders and businessmen in a variety of ways. Little wonder the consumers in most countries including the US, Sweden and Japan, where consumerism is a mounting force, are unsafe on account of unfair trade practices. In India where a majority of consumers are illiterate and have less purchasing power compared to their counterparts in the developed countries, they are always at the mercy of traders. Adulteration, substandard quality, over-charging, underweightment, misleading and false advertisements and a variety of other malpractices dupe them in a big way almost every day both in rural areas as well as in urban centres. According to an estimate, Indian consumer spends Rs. 85,000 crore annually in the domestic market and is cheated to the tune of Rs 1600 crore a year through deceptive and defective weights and measures alone. Adulteration and substandard quality of products take away a big slice of consumer spending. Mail order frauds run into several hundreds of crores in view of the existance of a large number of bogus firms selling spurious and substandard goods through the mail all over the country.

Adulteration

An adulteration syndrome is very deeply rooted in the minds of Indian people, businessmen and the producers. We have grown up accepting the proposition that milk is adulterated with water, pure ghee with vegetable oil, edible oils with argemone mexicana or other non-edible stuff, pulses with khesari dal (particularly tur dal) or infested with live insects, insect excreta and other foreign matter. Dropsy disease erupted in certain parts of Madhya Pradesh and Bihar as the consumers used mustard oil which was found to be adulterated with the extract of argemone. Spices and condiments are adulterated with extraneous matter like dried plants, cow dung, clay stones, saw dust etc. by the unscrupu lous traders. Adulterants are mixed with such fineness that it is well nigh impossible for the ordinary consumers to differentiate between the adulterated and the pure and genuine stuff. Turmeric powder, for example, is blended with inferior quality of rice ground and coloured with metanil yellow-a restricted artificial coal tar dye which, if consumed for six months, may cause incurable cancer. According to a recent study made by the Consumer Guidance Society of India (CGSI) adulteration of turmeric and chilli powder in Karjat and other areas near Bombay, was as high as 75 per cent. In another recent random check of samples of food articles from different markets in Delhi by the Quality Testing Laboratory in Lady Irwin College, it has been revealed that black pepper (whole) sold in private shops had a mineral coating-a real health hazard causing

cumulative poisoning often resulting in cancer. Mineral oil coating is prohibited under Prevention of Food Adulteration Act.

Water and starch in milk, iron fillings in tea and artificial sweetners (now banned) can make the innocuous cup of tea a major health hazard. Blotting paper in cheese, dry leaves in curry powder, roasted tamarind seeds in coffee, ghas jeera and britex powder in cummin seed powder etc tells only a partial story of adulteration. Occasional raids by the police in the Bura Bazar area in Calcutta have unearthed illegal factories 'manufacturing' ghee. Vanaspati has certain life span and it soon loses its food value (and becomes unfit for human consumption) when it expires. The 'manufacturers' however, mix this vanaspati with animal fat and a small amount of fresh vanaspati. This is put into new cans, sealed and released in the market. Equally harmful are irresistable coloured icecreams and sweets and toffees and lollipops which either contain max, chemical ash and dulcin as substitute for sugar.

Not money's worth !

It is a pity that the Indian consumer who spends a colossal amount in the domestic market, is the most helpless in getting value of his spending In the sellers' market, he is not sufficiently organised to challenge the high voltage sales gimmicks of small and well-entrenched trade organisations. The gullible are the easiest prey for confidence tricksters. Most often they are people not so rich, but desperately want something that nature has not bestowed upon them-whether it be a fairer complexion, bigger bosom, more robust figure, greater virility, more inches to their height or prevention of baldness. Cheap cosmetics and fancy items including substandard textiles, wrist watches, perfumes, safety razors toilet soaps etc. manufactured by the unscrupulous in India, are sold as 'foreign' after their being suitably packaged in the containers. The local 'manufacturers' get the supply of empty containers and bottles from the backlots of five star hotels elitist restaurents and garbage bins of the diplomatics residences whose staff are often in cahoot with the refuse collector and have a share when the profits are skimmed. Of late, hosiery traders have started bombarding consumers with advertsements of irrestatatable discount sales. Not many who rushed to take advantage of the "bargain offer" realised that they are simply palming of outmoded, old clothes at five times their original price.

There is an array of legislation preventing trade malpracties which includes, Prevention of Food Aulteration Act, Sale of Goods Act, Trade Marks and Merchandise Act, Weights and Measures Act, Prevention of Blackmarketing and Maintenance of Supply Act, Packaged Commodities Regulation Order, Drugs and Magic Remedies (Objectionable Advertisements) Act, Drugs and Cosmetics Act, Agricultural Produce Grading and Marketing Act and Emblems and Names (prevention of Improper Use) Act. As most of them are punitive in character, the impact in the form of redressal of consumer grievances is far too small especially because the sufferers by and large are not aware of their rights as consumers, nor do have they money to spend in order to fight against the powerful traders in the court of law.

MRTP to the rescue

During the last 4 years there have been two major developments in the field of consumer protection in India. First, the Government has come out with Consumer Protection Act in 1986 which proposes to protect the interests of the consumer through a suitable administrative machinery by setting up adivisory and adjudicatory bodies at the district, state and national level. However, amendments in the Monopolies and Restrictive Trade Practices Act (MRTP Act) in August 1984 and December 1986 have brought a new hope by opening new vistas for the victims of unfair trade practices. Prior to the amendments MRTP Act 1969 covered in the area of consumer protection only the restrictive trade practices and it is now the concept of unfair trade practices included in it. Under the Act, the unfair trade practices are: false repesentations in regard to the quality of goods or services (including the need or usefulness of the goods and services) misleading advertisements; offering gifts, prizes or other items with the intention of not providing them as offered, or creating the impression that something is being given or offered free of charge when it is fully or partly covered by the amount charged in the transaction as a whole. The unfair trade practices also include conducting any contest, lottery, games of chance or skill for the purpose of promoting, directly or indirectly, the sale use or supply of any product or any business interest and hoarding or destruction of goods, or refusal to sell the goods or to make them available for sale, or to provide any service, if such hoarding or destruction or refusal raises or tends to raise or is intended to raise the cost of those or other similar services and goods.

The new provisions in the MRTP Act have caught on among the consumers which is evident from the bulging number of complaints being received about the unfair trade practices ever since it came into existance. In 1985, the number of complaints was just 500 which rose as high as 9000 in 1986 and further to a new level of 18,000 in 1987. During 1987 the Commission had obtained a record 74 injunctions compared to a negligible 20 in 1985 and 50 cases in 1986. In a majority of 70 odd cases, the firms concermed had given undertaking not to pursue unfair trade practices, while an the remaining few cases the injunctions issued had become absolute. The growing consumer awareness may be evidenced by the fact that even in rural areas-especially in Tamil Nadu, the provisions of MRTP Act have been utilised effectively for redressing grievances by the consumers in diverse areas such as health, medicine, housing, schooling, food adulteration and household appliances. The procedure for making a complaint is simple and shorn of bureaucratic delay. It could be made by, posting an inland cover, as there is no prescribed forms or fees for the purpose. The complainant should, however, furnish the nature and details of the com-

plaint, including the name and address of the person against whom the complaint is lodged, as well as his own address. The complainant, witness or expert summoned by the Commission for tendering evidence would be paid first class fare (to and fro) as well as daily allowance for the period of travel and stay in Delhi at the modest government rate.

Legal aid

For the first time in India, a unique "free legal aid cell" has been set up exclusively for the consumers under the provisions of MRTP Act. To begin with, the Cell will have 15 professionals drawn from among lawyers, chartered accountants, cost accountants, company secretaries etc who will be allocated specific regions. The need for a free legal aid service has been felt for quite sometime because of the geographical distance involved for the consumers to pursue their cases in the capital. With the availability of free legal aid, consumers even at far-flung places would be encouraged to seek compensation for the damages caused. Even when a case is taken up by the Director-General, the legal aid personnel can help the concerned consumer in supplementing efforts of the DG. There can now be closer cooperation between the consumer and the Director-General. One important contribution of the cell would be with regard to awarding compensation to consumers under section 12 B of the MRTP Act.

Buyer's responsibility

'Caveat Emptor'—let the buyer beware, has long been the cornerstone of the consumer law in India which is likely to change to 'Caveat Vendor'—let the seller beare, with growing consumer awareness. In fact, the success of consumer movement now depends upon realisation on the part of consumers of their own rithts the way for which has already been paved by the Consumer Protection Act and MRTP Act. The problem of consumer protection has also to be dealt with at the level of business protection has also to be dealt with at rethe level of business morality. A fool-proof self regulating mechanism will have to be evolved by businessmen to save the consumer from being fleeced at the hands of unscrupulous traders. A dial between the council for fair business practices and consumer associations in any case is need of the hour. In order to stop consumer grumbling, the consumer will have to assert himself.

(Contd from page 26)

Along with setting up detoxification units in major cities, psychological counselling and occupational therapy should also receive greater attention to help the drug addicts fight the moral degradation that sets in after a certain stage. Also, a motivational approach should be initiated by the youths to dissuade their peer groups from falling victims to drugs. Unless people are educated on the bad effects of drugs, their abuse cannot be checked. ☐☐☐

(Contd from page 20)

Table 2

Level of literary in sample households

Category	Educational level (Per cent)			
	Illiterate	Upto Middle	Upto Matric	Above Matric
Male	63.93	17.81	14.15	4.11
Female	96.43	2 04	1.02	0.51
Child Male	88.41	9.42	2.17	—
Female	92 50	7.50	—	—

Table 3

Occupational distribution by sex

Occupation	Male	Female
1. Agriculture	92 (48.68)	1 (5.88)
2 Trade and Business	11 (5.82)	1 (5.88)
3 Labour	72 (38.09)	15 (88.24)
4 Service	9 (4 76)	—
5 Others	5 (2.65)	—
	189 (100)	17 (100)

Table 4

Statement showing average working hour and average wage rate

Occupation	Average working Hour/Day		Average Wage Rate (Rs)	
	Male	Female	Male	Female
Agricultural activities	8	5	8	4
Non-agricultural activities	8	—	19	—

New TV transmitters during 88-89

About 60 new TV transmitters are tentatively scheduled to be commissioned into service during 1988-89. The locations of these transmitters would, however, depend on the availability of the required equipment on the allocated channels of operation and also infrastructural facilities at various places.

The above information was given by the Minister of Parliamentary affairs and Information and Broadcasting Shri H.K.L. Bhagat in the Lok Sabha in a written reply to a question by Shri G. Devaraya Naik recently. ☐

Combating parallel economy

U. Thirupati Rao &
L. Sampathi Rao

Lamenting over the state of affairs as regards the parallel economy in the country, the authors here blame the high and unrealistic tax-rates for making tax-evasion frequent. Further, they expresse themselves against the voluntary disclosure schemes and amnesty to tax-dodgers which they feel have helped the persons with black money to go scott-free. As remedial steps the authors suggest massive tax-raids, strict policy for tax-collection and introduction of expenditure-tax, etc.

THE BLACK MONEY IS ONE OF THE important problems which is becoming an obstacle in the process of our economic development. The black money is an old concept. The practices such as corruption, fraud, etc., found their place in Indian society in a bigway during the period of East India Company. But at that time black money was not a serious problem. It became an acute problem during the period of World War II due to the scarcity of goods. Therefore, black money is the child of World War II. Since Independence, the size of black money has been increasing continuously. The term black money broadly includes money earned by black methods. Thus it is a tainted money, which has both the following implications:

(1) It is earned through infringement of legal provisions, and

(2) It is not accounted for and is kept secret. Thus it is a hidden money earned through anti-social or illegal methods which cannot be publicly declared, however it may be wholly in circulation in the country.

According to the Wanchoo Committee, the term "Black Money" is generally used to denote unaccounted or concealed income and/or undisclosed wealth, as well as money involved in transactions, wholly or partly suppressed.

Unaccounted money

Industrialists and other tax-payers avoid paying of taxes. In the eyes of the law it remains unaccounted. This unaccounted money is black money. Thus, any income or output which is attracted to tax liability, but not reported to taxation authority, is Black Money.

The black money is known by different names, Viz., moonlighting, parallel economy, black economy, unsanctioned economy, illegal economy, Subterranean economy, second economy and the like. Once black money comes into existence, it multiples and then is connived at. But one thing should be noted here that, the whole amount of black money does not remain as unaccounted, a part of it converts into the white.

Different kinds

There are three kinds of black money in India. They are simple, compound and political-administrative black money. Simple black money refers to that initial income which arises from tax evasion or in the form of abnormal incomes by violating economic rules. It is the income which through its further uses in saving, investment, etc., gives rise to compound black income. A continous operation of these illegitimate activities is not possible without a high degree of accomodation with the

political-administrative system. There develops a system of cuts, commission and kick forge and thus cements links between the two. The cuts, commissions, fraud, *etc.*, create political-administrative black-money.

The black money is rotated in business dealing and continuously in circulation. Therefore, its accurate estimation is impossible. No reliable data about black money is available. The figures given by any study on black money is mere anybody's guess. Notwithstanding, some experts and committees have estimated the size of black money in India. Their estimations are given in Table-I.

The Table I reveals that the size of black money since independence has increased considerably. In 1953-54, Prof. Kaldar has estimated that the percentage of black money to the national income was 6. The Wanchoo Committee has estimated black money in 1968-69 at Rs. 1400 crore constituting 4 percent of the national income. In the recent estimate, D.K. Rangnekar has estimated that the black money in 1980-81 was 16 per cent of the G.N.P. According to the estimate of Poonam and Sanjiv Gupta, in 1967 about 9.5 per cent of G.N.P. was black money, while in 1976 the percentage of it raised upto 49. As per the estimate of International Monetary Fund, the black money in 1983 was 50 percent of the national income in India. Recently, Raja Chelliah Committee estimated that the percentage of black money to G.N.P. in 1983-84, was 18 to 21. According to Black Money Study, the annual rate of new black money generation had reached Rs. 40,110 crores in 1984-85, or well over Rs. 4 crores per hour, 24 hours a day and 7 days a week.

According to Wanchoo Committee the high and unrealistic tax rates were responsible for making tax evasion attractive and profitable. What is worse, the lack of an efficient and honest tax collecting bureaucracy further encouraged dishonesty. Coupled with frequent resort to voluntary disclosure schemes and amnesty for tax dodgers, this provided encouragement to tax evaders to carry on their nefarious activities with impunity

Sources

According to the sources of origin, black money can be divided into two broad categories, viz., (i) illegal-source black money and (ii) legal-source black money.

It includes such money which becomes "Black" because it is earned from a source which itself is illegal. The instances of such money are pugree-payments, bribery, on-money on scarce commodities; illegal deals of foreign exchange, smuggling, gambling, etc.

Legal source black-money includes such money which has of course no stigma ab-initio and which is earned from perfectly legal and legitimate sources, but becomes "Black" simply because the income earner conceals his income in order to evade payment of (usually a high rate of) tax on it. Services which these income earners render are otherwise perfectly lawful and legitimate. Undisclosed portions of high incomes earned by professionals like Doctors, Chartered Accountants, Lawyers, Musicians, Film Actors and Actresses etc., belong to this category.

Any how, we can spot the following sources which raise the black money in the economy.

Scarce supply

The shortage of goods is one source of black money. In order to regulate the economy during world war II, various controls on prices and distribution were imposed as short-term measures. These controls led to abuse, black marketing, hoarding, profiteering, tax evasion and generation of black money. Even after Independence, due to planning, it became inevitable for the Government to regulate the economy. "Since considerable discretionary power lay in the hands of those who administered controls, this provided them with scope for corruption-'Speed Money' for issuing licences and permits and 'Hush Money' for turning a blind-eye to the violation of controls". Trading in permits, licences, etc., began which resulted in the generation of sizeable sums of black money.

Industrial sector

Industrial Sector is the major contributor to black money, for example, controllers of public limited companies try to buy low and get billed high and pocket the difference personally. The private sector follows the number of tricks for making black money. viz., underground production, to show low production and high cost etc.

Film industry

The film industry has been a traditional favourite home for black investments. Film industry requires cash which largely deals with black. The actual income is not shown to taxation authority by the concerned.

Smuggling

Smuggling plays a dominant role in the sphere of black money. The jewellery trade is a traditional heaven for it. At present, it is not only gold, gems etc., that are smuggled in to the country, but the items smuggled in the largest quantities are textiles and electronic goods.

Government expenditure

Large and ever-increasing Government expenditure itself is another major generator of black money.

Corrupt business practices

Payment of secret commissions, discounts, on money, pugree, bribes for various licences, permits and assessments etc., compel modern business community to maintain funds ready in black. Such corrupt practices are, no doubt, also responsible for generation of sizeable amount of black money.

Financing of election

The election period can be called the season of harvest for black money. The political parties spend more amount on elections than the ceiling on expenditure officially allowed. The excess amount comes from black money by way of donations from businessmen, industrialists, smugglers and the like. The doners follow different malpractices and accumulate black money. Thus, the political climate in India also provides golden opportunities for amassing black money and also avenues for it.

Thus, the black money is being generated and extended in Indian economy. No sector of our economy is free from black money. Wanchoo Committee shows that over the years unrecorded transactions had grown in size and dimensions and had created parallel economy operating simultaneously and competing with official economy.

Impact of black money

Every one is aware of the bad effects of black money. First of all, the direct effect of black money is the loss of revenue to the state exchequer as consequence of tax evasion, both from direct and indirect taxes.

Secondly, black money encourages investment in precious stones, jewellery, bullion, etc., Thirdly, black money has encouraged diversion of resources in the purchase of real estate and investment in luxury housing. Since most of these buildings are registered at undervalued prices, the Government loses by way of tax revenues when these buildings are transferred as gifts or are bequeathed.

Fourthly, black money will create the income inequalities in the society because there is little chance to avoid taxes for salaried people. But the professional persons are expert in tax evasion. They satisfy all types of wants, but the salaried middle class does not.

Fifthly, black money results in transfer of funds from India to Foreign countries through clandestine channels which is possib.e by violations of foreign exchange regulations.

Last but not the least black money has corrupted the political system in a most vicious manner. At various levels, party functionaries are reported to be collecting funds. The politics of black money has corroded the moral fibre of Indian Polity. Ministers dole out favours of crores by accepting black money donations of a few lakhs from businessmen. National policies are being bent in favour of the big business under the pressure of black money. Thus it is the parallel economy which does the backseat driving.

Schemes to check black money

Wanchoo Committee opined that "It is no exaggeration to say that black money is like cancerous growth in the country, if not checked in time, is sure to lead to ruination". Therefore, black money must be controlled.

After independence, various committees were appointed to make suggestions for solving the problem of black money by the Government. The Government has resorted to demonetisation for eradication of black money in the years 1946, 1965 and 1981. Tax evaders store black money in high currency notes. By demonetisation, they lose the amount stored in demonetised notes. But, with high inflationary situation that prevails in India today, the Rs. 100 and Rs. 50 currency notes are held even by the lower middle classes and labourers. So this measure has its own limitation.

The Government of India laid stress on voluntry disclosure schemes to bring black income into circulation. The first voluntary disclosure scheme was announced in 1951, but the response was poor. In 1965, another voluntary disclosure scheme was declared. According to it, the person should pay 60 per cent of his declared income as tax to the Governement. The Government passed an ordinance in 1975 for diclosure of black income. Raja Chelliah Committee suggested declaration of another voluntary diclosure scheme to unearth black wealth.

In 1981, the Government declared a scheme to checl black money, known as Special Bearer Bonds Scheme.

In the Union Budget 1985-86, some provisions are made to tackle the problem of black money, viz., the limit of wealth tax is increased upto Rs. 25 lakhs; and income tax to Rs.18,000; estate duty and sur-charge is abolished. Recently Parliament has permitted all political parties to accept donations.

India's war against black money has now entered a crucial stage. Several pragmatic policies of the present Government have met with significant success and there is also an amazing public awareness of this problem. This is a healthy sign.

Remedies

(i) Tax raids is one of the important weapons used by the Government to search out black income from time to time. The Government must organise massive tax raids on builders, diamond and steel marchants architects and new bankers to undearth black money. If tax raids are arranged in a continuous process to search out tax evaders, no one will dare to amass black money.

(2) A strict policy for collection of taxes is necessary. Tax rate may be either high or low, it does not matter. If the tax collection authority does not take interest in collecting taxes, then people shall try to evade.

(3) Government expenditure needs to be drastically reduced particularly black money prone projects and programmes.

(4) To undertake compulsory purchases of undervalued real estates by the Government so that no one may store black money in the form of real estate.

(5) It is necessary to introduce expenditure tax again, or to introduce consumption tax, in the economy. It will help to check the problem of black money. Another

benefit of such tax will maximise household savings and minimise black money.

(6) The voluntary discloser scheme should not be resorted to in future; because people evade taxes assuming that Government shall declare such scheme in future.

(7) There should be no permission to political parties to accept donations. There should be a binding on the political parties to produce their accounts before the public so that nothing can be concealed by them.

TABLE-I

Estimates of the size of black money in india

Year	Rs in Crores	Percentage of Black Money to G N.P.	Estimated by
1953-54	600	6	Prof N Kaldar
1961-62	6		
1953-54	600	6	Prof N. Kaldar
1961-62	700	4	Wanchoo Committee
1968-69	1,400	4	
1953-54	600	6	Prof N. Kaldar
1961-62	700	4	Wanchoo Committee
1968-69	1,400	4	Wanchoo Committee
1961-62	700	4	Wanchoo Committee
1968-69	1,400	4	Wanchoo Committee
1961-62	1,150	7	D.K. Rangnekar
1968-69	2,833	9	D.K. Rangnekar
1980-81	18,241	16	D.K. Rangnekar
1967	--	9 5	Poonam & Sanijiv Gupta
1978	—	49	Poonam & Sanijiv Gupta
1983	—	50	I.M.F
1974-75	9,958 t0 11,870	15 to 18	Raja Chelliah Committee
1983-84	37,000	18 to 21	Raja Chelliah Committee
1984-85	40,110	—	Black Money Study

Source (I)Business India, Oct 22 to Nov 4, 1985
(II) Commerce, March 2,1985 and July 6,1985
(III) Union Budget, 1985-86
(IV) Southern Economist, May 1987 and July 1987 and
(V) Yojana, Feb 16-28, 1987

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to withdraw the drug so that the patient can once again lead a normal life. De-toxication and proper re-habilitation using both medical and psycho-analytical process is needed. For proper re-habilitation social awareness leading to active community involvement is an important factor in the deaddiction of drug addicts. Without it, lasting rehabilitation is not possible. The campaign to promote awareness stresses the need to overcome the social stigmas attached to identifying a family member as a drug user. Support of the parents is most essential to create self confidence in the patient to lead a normal life. Failure in proper rehabilitation of the patient may lead him back to addiction. Seventy five percent of drug addicts restart their habit even after undergoing treatment and supervision for nearly four years.

In a rough estimate, 50 million people in the world over are addicted to drugs. In the United States alone there are 20 million addict.

In India, the problem of drug abuse has taken alarming proportions in the entire country particularly in metropolitan cities. Terrorists were found involved in drug trafficking and peddling to earn easy money to finance their activities. It is lucrative business, since drugs fetch 50 times more price than gold. Number of addicts in India is estimated to be over seven million. In Delhi alone four lakhs, ranging the age group between 15 and 30 including innocent school children are addicted. Between November 1985 and January 1988, 4437 cases were registered in Delhi alone. International Narcotics control board says that the spread of the drug abuse in India is alarming. So also is the number of illict narcotic manufacturing laboratories in India. In 1983, 139 kg. of narcotics were seized in India. It went up to 2700 kg by 1986 and more than that in 1987. Share of India in seizure of heroin all over the world is also quite high. Out of 7.7 tonnes seized in 1987, Indias' share was 2.7.India is used a major transit point and is sandwitched among the drug producers. Thailand and Laos and Afganistan, Iran and Pakistan. At an average 10 tonnes of white powder is being handed through India.

A nexus between drug peddlers and smugglers is now established. Both are profitable business and the commmon element of law breaking gives them a common bond.

(Courtery : PIB Feature Service)

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Centre's role

Later addressing the NDC The Finance Minister, Shri N.D. Tiwari referred to certain issues raised by some Chief Ministers—anomalies in saving schemes, new provision of section 44 AC of the Finance Bill, the rise in administered prices leading to fall in the States' revenues and one-sidedness of the terms of reference of the Ninth Finance Commission— and said that the Centre's share in financing the State Plans had gone up from 36.8 per cent to 42 percent. He also revealed that State loans to the tune of Rs. 12846 crore were rescheduled and a sum of Rs. 2300 crore written off. He said that the Government was confident of achieving the Seventh Plan targets.

Mobilise resources

The Planning Minister and the Deputy Chairman of the Planning Commission, Shri P. Shiv Shankar said that all the suggestions of the Chief Ministers would be looked into by a committee of officials. He urged the States to mobilise as far as possible internal resources for financing the Seventh Plan programmes. He reiterated that the fulfilment of the Seventh Plan targets depended on the success of the resource mobilisation efforts.

He mentioned that the public sector enterprises, both in the Centre and the States, had lagged in resource generation and the rise in the administered prices of some items was part of the overall plan strategy of generating resources for development. He hoped that some progress would be made towards harmonisation of sales tax rates which was necessary to avoid losing resources through competitive tax cuts.

Shri P. Shiv Shankar told the NDC that shortfall in domestic savings would be around 4.4 percent over the five year period whereas there would be about 3 per cent shortfall in total investment. However, given the fact that the first half of the Plan period was characterised by severe weather conditions, it was still no mean achievement, he said. □□□

FACT wins international award

The public sector Fertilisers and Chemicals Travancore Limited (FACT) has won the prestigious International Europe Award 1988, for its outstanding performance. The award is given every year by the Trade Leaders Club Madrid to selected companies from 120 countries based on outstanding excellence.

FACT will receive the Europe Award on March 21, at a function in Paris.

According to the President Trade Leaders Club, FACT has been selected for the award after a review of their performance on the basis of information received from the Chambers of Commerce, professional associations and Government agencies.

Efforts to increase the export of textiles

A number of measures have been initiated to boost the export of Textiles. A textile modernisation fund of Rs. 750 crore has been created for facilitation of modernisation of textile industry. In order to encourage improvement in the fquality of cotton yearn, excise duty on auto-coners manufactured domestically has been reduced from 15% to 5%.

The Government also permits import of 4 types of sophisticated textile machines at a concessional rate of import duty of 25%.

The export of cotton textiles (Yarn, made ups and fabrics) was Rs. 928.14 crore during April-December, 1987 compared to Rs. 506.35 crore during the same period last year. These exports are not likely to effect domestic consumption and prices since there is substantial unutilised spinning and weaving capacity in the country. The Government has also taken several steps to meet the domestic demand such as supply of cheap cloth like Control Cloth, Janta Cloth and Sulabh Fabrics through National Consumer-Co-operative Store.

Steps to revive sick industrial units

A Margin Money Scheme has been introduced with a view to supplementing the efforts of the state governments in reducing the incidence of sickness in the small scale sector. Under this liberalised scheme, the maximum amount of assistance per unit available to sick small scale units for rehabiliation has been increased from Rs. 20,000 to Rs. 50,000.

The Minister of state for Industrial Development, Shri M. Arunachalam told the Lok Sabha on February 23, 1988 that the Reserve Bank of India had issued guidelines to the banks for the stregthening the monitoring system and for arresting industrial sickness at the incipiant stage so that corrective measures could be taken in time. The banks had also been directed to formulate rehabilitation packages for the revival of potentially viable units on merits of each case. He said the Board for Industrial and Financial Reconstruction (BIFR), a quasi-judicial body set up under the Sick Industrial Companies (Special Provisions) Act, 1985 to deal with the problems of sick industrial companies in an effective manner, had become operational with effect from 15th May, 1987, the Minister added.

The Yojana issue of May 16-31, 1988 will carry thought-provoking articles on the plight of Indian Women. The authors will include the Union Minister of State for Youth Affairs, Sports and Women and Child Development, Mrs. Margaret Alva, the Chairman of Central Social Welfare Board Mrs. Sasmeeta Srivastava and the noted novelist and journalist, Kamala Markandaya.

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Women of rural India—an overview

Sasmeeta Srivastava

In this article, Mrs. Srivastava who is Chairman of the Central Social Welfare Board, examines the status of rural women vis-a-vis their counterparts in the urban areas and highlights the social taboos which are still accepted and practised. She lists the various programmes undertaken by the Government in order to integrate women into the process of development. Mrs. Srivastava also enumerates the Seventh Plan strategies for development of rural women and feels that what is needed most now is to change our perception of rural women and accept the fact that they are active participants in development.

THE PRINCIPLE AND VALUE OF gender equality is not a concept of recent origin in India. This was accepted by the Indian National Congress through the fundamental right resolution in 1931, which later found a place in the Constitution of the Indian Republic. It is also a reassertion of the ideology enunciated by the Father of the Nation.

Women and plans

Welfare Programmes oriented towards the welfare of women and children found a place in first Five Year Plan of the country and in the Sixth and Seventh Plan separate chapters have been provided on women' development. In 1971, Government of India appointed a Committee on the Status of Women in India (CSWI) to comprehend the extent of changes in the Women' status and rights and to suggest measures 'which would enable women to play their full and proper role in the building up of the Nation'. On the basis of the Report of the Committee on the Status of Women in India, Parliament urged the Prime Minister to "initiate a comprehensive programme of legislative and administrative measures aimed at removing as far as possible the economic and social injustices, disabilities and discrimination to which Indian Women continue to be subjected". Again the declaration of International Women's decade in 1975 brought into focus the importance of bringing women as part of development With the women of rural India constituting 77% of the total women in the country, the need to integrate these women into development as an essential pre-requisite for overall development has been highlighted by policy makers and development planners.

Status of rural women

A little less than 80% of the women live in rural India and a majority of them are labourers in the agricultural sector and allied fields. These poor women have the dual burden of contributing to the family income and of shouldering the responsibility of looking after the family. Their work pattern extending from 13 to 17 hours speaks of the struggle they have to put in to make a living. They have to spend long hours in husking, grinding, cooking, fetching potable water, fuel collection, etc. Work outside the home may include work at her own farm, or cattleshed, employment on wages, or income generating activities. During off-season she has to do household work in the landlord's house. She has to perform more work than physically feasible and even then she has to live below subsistence level with no nutritious diet. The common characteristics of these agricultural labourers include lack of land ownership

rights, insecurity in employment, unemployment, underemployment, lack of bargaining power, low wages and over-extended work days. Nothing belongs to them and they have got no power or status either in the family or society. Higher paid jobs, like ploughing, digging, etc. are done by men who are paid in cash and low-paid jobs like sowing, weeding, transplantation, irrigation, etc. are allotted to women who are paid in kind.

Social taboos

Even though women's votes are considered to be important, they have got no place in the village power structure. Panchayats or Sabhas have no separate wings for women. The social restrictions and constraints prohibit rural women from taking part freely in cultural and recreational activities. Women do not deal with Panchayats and even when coopted in them their husbands carry out the functions expected of them.

An emerging phenomenon in the rural area is the female headed household. This may be due to the death of the husband or migration of men seeking employment in urban areas. The woman has to assume the role of the head of the household and responsibility for the support and care of children and elders of their family. Her income is not adequate to meet the family needs and there is not enough money received from the menfolk.

Distressing features

A review of the Status of rural women with reference to demographic, educational, health aspects, etc. reveals certain continuing distressing features.

While the sex ratio shows a decline in the female population from 972 in 1901 to 930 in 1971 and 935 in 1981 for the whole country, rural areas, normally, also reflected a similar pattern even though in certain rural parts the ratio of females was found to be higher, the reason for which may be male migration.

Illiteracy

It has been observed that the ratio of infant mortality rates in rural areas is nearly one and a half times that of urban areas which is an indication of the low health status and conditions of malnutrition among rural women. But it is interesting to see that the mortality rate declined from 136 in 1970 to 124 in 1980. There are indications of linkages between the literacy rates of mothers and child mortality rates as is evident from the fact that infant mortality rate was 132 (rural) and 81 (urban) in the case of illiterate mothers as against 90 (rural and 53 (urban) in the case of literate mothers.

The literacy rate of rural females was 17.96% as compared to 47.82% in the case of urban females during 1981 even though the female litracy rate increased from 13.1% to 18% in rural areas. A striking feature is the wide variations between various States with Kerala having a female literacy rate of 65.73% in rural areas and Rajasthan having the corresponding rate at 5.46%

The school enrolment rate was observed to be 25.8% and 44.3% for girls in the age groups 5 to 9 years and 10 to 14 years respectively in rural areas whereas the corresponding figures are 55.6% and 65.6% respectively in urban areas.

Malnutrition

Large number of children suffer from malnutrition, one of the main reasons for which is stated to be mother's poor health. Anaemia among rural women is estimated to be 60% to 80%.

Programmes

In order to benefit the rural women in various fields like social, educational, health, economic, political, etc. and to integrate them into the process of development, a concerted effort was made at various levels, i.e., Central Ministries, State Governments, Planning Commission, non-governmental organisations, social service and research agencies, etc. through various programmes. An illustrative list of such programmes is given below.

Mahila Mandals of the Department of Rural Development and Rural Welfare Projects of Central Social Welfare Board provide a wide notwork of services which include educational, instructional, recreational, welfare and income generating activities with a large number of workers-mainly women-at the village level. There are over 50, 000 centres, established in various States of the country with about twenty five to 100 women members, in each of the centres, associated with it.

Integrated Rural Development Projects (IRDP). This programme, oriented towards rural development and poverty eradication, is a credit-linked subsidy scheme and provides credit for agriculture, sericulture, cooperation, animal husbandry, horticulture, village industries, etc. It is perhaps due to lack of local participation that these programmes do not reach general poor women to the desired extent. Efforts have been made to bring more and more rural women within the fold of the programme. Also, while selecting beneficiaries preference in given to female-headed households.

Development of Women and Children in Rural Areas (DWCRA)

Recognising that the benefits of I.R.D.P. are imparted to only a fringe of the women in rural areas, the programme of DWCRA was brought into existence with the objective to help rural women and children derive benefit from development programmes already in existence.

Integrated Child Development Scheme (ICDS) With a view to providing child care facilities, a priority need of the rural women, ICDS programme was launched with a package of services like anganwadis, health services, nutrition, etc. The problems faced in the implementation include lack of coordination between the departments participating in the delivery of services like education, public health, block, CARE, UNICEF, etc., lack of cooperation of village leaders, etc. in addition to the beneficiaries not being aware of the benefits imparted through the programme.

The Minimum Needs Programme (MNP) is a package of services for rural women which includes primary health programme, elementary education, rural water supply, electrification, roads, housing, environmental improvement, nutrition, etc. Since the responsibility for generating these services is vested in the Panchayats, women's ideas are not incorporated.

Training of Rural Youth for Self-employment (TRYSEM): The main thrust of the scheme is on equipping rural youth with necessary skills and technology to enable them to take to vocation of self-employment. This is now an integral part of IRD programme. Priority is to be given to women accounting for at least one third of the beneficiaries.

National Rural Employment Programme (NREP) ·
The programme assists in generating additional gainful employment, creation of durable economic assets for strengthening the rural infrastructure, etc. and is helpful in providing off-season employment to the under-employed. The crucial constraints in the implementation of the programme include lack of coordination with IRDP and other programmes, payment of wages in kind, inability to mobilise local resources, etc.

Rural Landless Employment Guarantee Scheme (RLEGP) is designed to generate additional employment in rural areas especially during lean season.

Krishi Vigyan Kendras (KVK)· The scheme is intended to develop training infrastructure in rural areas for the benefit of farmers and fishermen and would fill the gap between the knowledge of the farming community and the advanced agricultural technology.

Drought Prone Areas Programme/Desert Development Programme: The main components of the programme are irrigation, soil conservation and dryland farming, afforestation and pasture development, sericulture, horticulture and fisheries development.

Programmes of the Central Social Welfare Board: The Central Social Welfare Board extends financial assistance to Voluntary Organisations for setting up income generating units under the 'Socio-economic programme' by introducing technical and marketing support with focus on diversified occupations and including new skills required by the job market. Condensed educational and vocational training courses for Adult Women are being organised by the aided agencies to improve their employment prospects and for rehabilitation of women in distress. The Awareness Generation Project for Rural Women is oriented to develop leadership qualities among rural women and to involve them in developmental activities.

In addition, programmes of Adult Education provide education on subjects like health, nutrition, child care, family planning, skills and craft, etc. Khadi and village industries provide employment opportunities to women. The National Small Industries Development Corporation, District Industries Centre, etc. also organise programmes for the benefit of rural women.

These programmes were supported by various other measures initiated by various agencies so that women may actively participate in their own development as well as the country's development.

Social enactments:

A number of soical enactments were put on the statute books, for removing various constraints which hindered the progress of women. Some of them affecting women include Hindu Marriage Act, Special Marriage Act, Child Marriage Restraint Act, Code of Civil Procedure, Dowry Prohibition Act, Factories Act, Equal Remuneration Act, Maternity benefit Act, Criminal Law Act, etc.

Media and publicity

Radio and T.V. presented suitable programmes for creating awareness about various legislations, programmes etc. and on the role of women in development The Media and Press also helped in promoting social attitudes towards women and people to fight evils like dowry, child marriage, drinking, etc.

Science and technology

The Council of Social Science Ressarch and Department of Science and Technology have contributed to a wide spectrum of activities like projects for development of smokeless chulhas, use of solar cookers, setting up of bio-gas plants and devices for improving the water purification system. Improved agricultural implements, better methods of cattle rearing, etc. were introduced. New technologies for transplantation, post-harvest activities, processing of rice products, fish processing, pearlculture, cashew and coir industry, etc also were made available.

Statistical data

Lot of data and information were made available by Indian Council of Social Science Research, National Sample Survey Organisation and Registrar General of India and this has thrown up more light on the problems of women. The Planning Commission formed a steering committee to advise on collection of data on women and children's work in the rural areas more accurately

Voluntary organisations

Voluntary organisations have to be stimulated to extend their activities to rural areas and they are being assigned an important role under all the important programmes of the Government in addition to creating awareness among women regarding their rights and privileges and public opinion against social evils. Also, for promoting popular support and securing public participation to the various programmes the assistance of Voluntary Organisations is sought. There are intermediaries like educational institutions, research agencies and other voluntary organisations at State and national levels which act as support groups between women's organisations at grassroots level and the agencies which implement the development programmes and whose out reach seldom

reach the rural areas particularly women. It is in recognition of the role of Voluntary Organisations that a separate provision of Rs. 150 crore has been provided in the Seventh Five Year Plan, for their encouragement and development.

Various Committees

There are various *committees/conferences* and other institutional arrangements organised to coordinate and advise on the development activities of women.

The National Committee on Women under the Chairmanship of the Prime Minister to be assisted by a Women's Welfare and Development Bureau in the Department of Women and Child Development act as a nodal point to coordinate policies and programmes and initiate measures for women's development.

Special committee to advise on Adult Education Programmes set up by the Ministry of Education made significant contributions for the improvement of the programme.

The National Conference of Women made recommendations in the field of employment, health education, political participation, etc.

The Indian Association for Women's Studies organised conferences to contribute to the progress of women.

The National Research Development Corporation has set up a number of technology-cum-training centres at selected focal points all over the country in addition to the publishing of a compendium of an appropriate technologies for women.

The National Dairy Development Board also contributes to the income generating activities of women.

The Committee for Employment set up by the Ministry of Labour and the Committee for implementation of legal aid served women's interests.

A National Plan of action was formulated by the Ministry of Social Welfare which suggested a series of measures for the betterment of women including those unemployed.

Future strategy

The strategies for rural women's development as defined in the VII Plan may indude the following:

1. To raise the economic and social status of women in order to bring them into the mainstream of national development.
2. To bring about confidence and awareness of women's potential for development as also their rights and privileges.
3. To restructure educational programmes and school curricula to eliminate gender bias.
4. To reduce the drudgery of women with increased stress on science and technology devices.
5. To impart training on various aspects in backward areas.
6. To reorient beneficiary-oriented programmes to suit the rural women.
7. To cover 100% in elementary education for children upto the age of 14 years, by 2000 A.D.
8. To define health programmes to achieve health for all by 2000 A.D.
9. To modify the content of Adult Education programme to incorporate the new value system in the community.
10. To improve the existing skills and to impart new skills under the programmes in agriculture and allied sectors.
11. To modify the various rural development programmes to suit the rural women more adequately.
12. To ensure proper implementation of Equal Remuneration Act.
13. *To explore the possibility of setting up rural* banks for lending improved agricultural tools and to promote development programmes for women *at the grassroots level under the concept of* Vigyan Kendras.
14. To formulate programmes taking into account the regional and cultural diversities.

While welcoming the strategies laid down in the Plan, what is most needed is the necessity to change our perception of rural women. They should not be taken to be persons without any aspirations for themselves except a bright future and welfare of their near and dear ones, brooking every kind of insult, with no right to fight against the values, norms and traditions which served to oppress her, assuming prime responsibility for domestic work from which they don't find an escape, with no access to their own development or country's development. It should be accepted that woman is an active participant in development. She has got a right to empowerment. She should be treated as a producer. She can claim better prices for her produce. She needs a better living through better wages. She should possess land ownership rights and should have easy access to credit, science and technology to reduce the drudgery of labour. She should be free to refuse to accept the age old traditions, assert her rights to fulfil her own aspirations and take part in society as full citizens.

Conclusion

The inventory of work done to improve the status of women by governmental and non-governmental agencies is impressive. A lot of work has been done although much still remains to be done. To bring nearly 248 million rural women living in an area of nearly 31 lakh sq. kms. to actively participate in the process of their own and country's development is, by no means, an easy task, especially if it is taken into consideration that these women were victims of centuries of oppression a group adversely affected by age-old traditions and still having a status much below to men and their counterparts in urban areas. However it has been accepted that the future of India cannot be built without the willing and conscious participation of these rural women. Considerable thinking is going on at various levels for

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Long-suffering section of a neglected sector

S.C. Bhatt

'The lot of the rural woman is one of drudgery, discrimination and denial of their basic rights and needs. They are condemned by a society based on inequality of the sexes despite what the Constitution has to say and despite our great Gandhian heritage to suffer in solitude while contributing their labour to the upkeep and running of the household', says the author and feels that illiteracy is the root cause of the present sorry state of rural women. He suggests various measures to ameliorate the oppressive, unequal and unjustifiable condition of rural women.

YEARS AGO, IN 1962 I REMEMBER HAVING visited the first or one first all women's panchayats, at Piparla near Bhavnagar in Gujarat. The piece I wrote on the coming of the village's women at the helm was widely published. That was still a period of some idealism and innovation in rural development and the Gandhian spirit that women, half the nation, must be given every opportunity to play their role in the building of the nation was still fresh in the minds of the people who mattered. Not that an all-women's panchayat here or there was going to solve the gigantic problems that the rural women faced, but there was some awareness that the mighty energy represented by women in rural society should be harnessed for their and the country's good.

Now we do not hear any more of such panchayats. If the rural areas have suffered neglect in comparison with the attention lavished on the cities and towns, the rural women have lagged much behind their sisters in the urban areas. Again, they have been lagging behind their male counterpart in their own villages and the tribal communities. This, despite the numerous correctives applied and the substantial programmes for the betterment of the village women launched in the recent past!

The drudgery

Essentially, the lot of the rural woman is one of drudgery, discrimination and denial of their basic rights and needs. They are condemned by a society based on inequality of the sexes, despite what the Constitution has to say and despite our great Gandhian heritage, to suffer in solitude while contributing their labour to the upkeep and running of the household. They must collect firewood, fetch drinking water day in and day out, walking sometimes as long as five kilometres, bear and bring up children in a monotonous succession, put up with anaemia and malnutrition, suffer the agony of seeing some of the children die in infancy and sometimes their own life ebbing away out of sheer malnutrition, neglect and poverty.

And multifarious role

The contribution they make as "workers" cannot be recorded because household work is not given any quantified value. Their participation in agriculture in the households where farming is practised is substantial. From the care of the cattle, milking of cows or baffaloes and cleaning up of dung from the cattleshed and preparing of dungcakes or storing the balance as manure, to threshing of grain at harvest time, helping out in weeding operations or taking the midday meal to the husband or sons in the fields, the woman is an integral part of the farming operations. All the while she is also the custodian of the house, its cook, babysitter and the upholder of its "izzat". The menfolk can have some relaxation, smoke bidis or puff away on the

Hukkah, occasionally gamble or habitually drink, visit brothels in the nearby towns and indulge in some such pastimes if they can afford the money, sometimes even if they cannot.

But no recognition

The woman however, has no relaxation worth the name, even if she has the time for it. Weddings or funerals and post-funeral ceremonies, some *gupsup* at the riverside or the village well, where these exist, are their only moments of laying aside the burdens of drudgery and hard labour. The idealism with which we started of liberating our women had evaporated by the sixties and the politics of votebanks had taken over. Many of the schemes which could have helped the rural women to come out of their seclusion and win for themselves a place of equality and a recognition of their role as important and equal members of the village community for a time lost their edge.

Illiteracy, the bane

Illiteracy has been rampant among the women of the rural areas and the trend has been allowed to grow for years. Eduction as an essential input of development was not recognised for many years and it was considered more a welfare activity than an integral part of the development process. Only recently, the link between female literacy and the overall birthrate has come to be seen in its proper perspective. In connection with the preparation of policy papers for the Eighth Plan one of which will deal with family planning and the age of marriage, it was stated by the official spokesman that the birthrate had fallen significantly in the States in the south and one of the factors responsible for it was the high rate of women's literacy. As against it, the birthrate had not fallen in other States, mainly the Hindi speaking ones, where the literacy rate among females was much lower.

As it is, women's education, especially in the rural areas, has not made any spectacular progress. The rural areas account for a total of 77 per cent of our womenfolk but the rate of literacy among them, by the 1981 census, was only 17.96 per cent, although in the urban areas 47.82 per cent were literate. In other words, one in every five women in the villages could just read and write, while in the cities and towns nearly every other women had the power of literacy. Everything that we can muster. from a largely enlarged adult literacy campaign to a technology mission to abolish ignorance through the spread of knowledge, is urgently called for to better the lot of the village women. Education has to be recognised as the foundation on which health care of the children, the mother herself and the realisation that frequent pregnancies are a source of great danger to the woman and her family can be safely built.

Eradication of illiteracy among the adults, especially the age group 15-35 years, was accorded a high priority and was described a major thrust area. And yet the target of covering all these adults who were illiterates, numbering 90 million, by the end of the Seventh Plan, or early 1990, cannot be realised. Now the target has been put back by another five years, the end of the Eighth Plan, or 1995, being the year when the highly desirable goal of making every active adult in the age group 15-35 literate would be achieved. According to the Mid-Term Appraisal of the Seventh Plan, some 40 million adult illiterates would be taught to read and write and the remaining, whose number would naturally swell as the years advance, would be covered by the end of the Eighth Plan.

Pragmatic education needed

The sound Gandhian education principle that education should be related to the day-to-day life of the learner was lost sight of in the past decades and now we have to realise its validity over again in the drive to spread literacy in the rural areas and elsewhere. The technology mission on adult literacy has recognised that adult teaching must be mixed with a package of useful lessons and practical skills relevant to the life of the learner. Special attention will have to be paid to the needs of the women in this matter and the role of the 'anganwadis', where these are playing an effective part, must be properly built in the programme. Above all, it must be seen that education is the key which would open many a door and immeasurably strengthen the forces for the good of the villages and the nation.

Fortunately, the efforts for enhanced enrolment of girls in elementary schools are being attended with some success.The achievement of girls' enrolment in the first three years of the Seventh Plan for additional enrolment is expected to be 84 lakhs as against the target of 68 lakhs in the class I-V group, but in the next higher group of VI-VIII less than half the target of 73 lakhs was estimated to have achieved in the three-year period. Figures for the rural areas are not separately available but it would be a safe bet that the progress would not be that good in the villages, as compared with the urban areas. Needless to say that redoubled efforts are necessary in the remaining period of the plan to set up the enrolment drive and the attendant action to induce parents to send their daughters to school. The plan lays much emphasis on the education of girls. More and more women teachers are to be recruited so that prejudice does not stand in the way of the girls being put to school if the teacher is a male, girls are to be provided with dresses and girls' education has been made free throughout (upto class XII).

The targets of universalisation of education upto the age of 11 by 1990 and of 14 years by 1995 would appear to be stiff if the present rate of progress is any indication, but we must ensure that the targets are achieved. In particular, the education of village girls in the relevant groups must receive the utmost attention.

It is a good sign that the programmes for extention of education in the villages is being integrated with the

National Rural Employment Programme (NREP) and the Rural Landless Employment Guarantee Programme (RLEGP). Funds for these programmes would be used for building schools and health centres, among other things. A psychological approach here would help achieve a big breakthrough by making many of the men and women working on these construction programmes enrole themselve and their children, especially girls, for the formal and adult education that would be imparted after the schools are ready.

The rural areas have suffered neglect. The recent ferment among the farmers in different parts of the country has been sought to be dismissed by some media as "kulak uprising" and some others have viewed it more in terms of partisan politics than the basic causes of lack of adequate attention to the needs of the village. Plan figures do not reveal the full story. For example, the Fourth Pay Commission of the Central Government has raised the salaries and other emoluments of government employees to unprecedented proportions. The States are bound to follow suit. The public sector which was ahead of the regular government departments in the matter of salaries of staff is now perhaps behind and their employees are also agitating for more and would, in all probability, get it. In the cities, it is not unusual for even Reserve Bank officers, not to talk of the other staff, to go on strike to demand more and more. University dons strike for months and the media feature their "legitimate demands."

What is needed

None of these mounting expenses would get reflected in the plan figures because staff salaries are all non-plan. So, while the urban areas are the recipients of much largesse in the form of non-plan benefits there is no corresponding channeling of funds to the villages. A heavy injection of funds in rural schemes of agriculture, water resources, education and health care, dairies, cooperatives, road and the like is what is called for if the growing imbalance between the cities and villages is to be reduced.

Meanwhile the various employment and anti-poverty programmes have to be strengthened and made more effective, especially in their application to women. The percentage of women heads of families benefiting under the Integrated Rural Development Programme (IRDP) was 15.23. Out of a total of 37.23 lakh families which were the beneficiaries under the programme in 1986-87, women accounted for 5.67 lakh. This was a considerable improvement on the previous figures but short of the target which was 30 per cent. As the menfolk migrate in larger numbers than before to the cities and towns in search of livelihood more and more women are left behind in the villages to fend for themselves and the children, if not for the aged parents, and they need work.

Training programmes

The IRDP and other programmes have to offer more opportunities to women for employment and for that to succeed they need to be drawn into the programmes for training for skills which would equip them to qualify for the jobs. The Mid-Term Plan Appraisal itself recognises that the training programmes for women have to be effectively implemented and a fresh look is "needed to be given to identification of trades and activities which may gainfully be taken up by women. "Milk cooperatives are an important medium for women's self-employment, and the example of States like Gujarat where many cooperatives consist of women has to be followed by the other States. The National Cooperative Development Corporation, NCDC, has a programme for training women as part of their development projects.

Give villages amenities

The drudgery part, referred to earlier, can be lightened to a considerable extent by extending and effectively implementing the drinking water and improved 'Chullah' programme. The 'Chullahs' are proving to be popular and in the first two years of the Seventh Plan, 20.26 lakh 'chullahs' have been installed, against the plan target of five million. If we think big we can also extend the benefit of natural gas, [illegible] is burnt or 'flared' to no good use, to the nearby villages. Even some outlets can be provided from the H[illegible] and other gas pipelines for clusters of villages. That would be a real sign of the nation caring for the rural areas and their most suffering component, the rural women. Why domestic gas only for the cities? Why not for the villages?

Much more remains to be done for the rural areas. And so much more for the women there. □□□

(Contd from page 7)

the required change in the process, development design, development aim and development content to achieve this objective.

A visible new trend in the administration of various women's programmes is a shift 'from doing things for needy women to doing things with them.' Another striking outcome is the emergence of rural women as a critical group for development, and, in all Government departments, national institutions or non-governmental organisations, at the policy level, programme level, research area or training area, women's interests and development form an integral component. □□□

Survey to assess ground water conditions

The Government have conducted hydrogeological surveys in an area of about 24.2 lakh sq. km. for ascertaining ground water conditions in the country. The satellite-based remote sensing techniques have proved to be a useful aid in delineating features indicative of ground water occurrence. □

Attitude towards women must change

Dr. Sarojini Sharan

To enable women to come out of the protective shell of males, every possible help should be extended to them to gain self-confidence. And to achieve this objective, the author feels, Government, voluntary agencies, youth and even women in 'power and position' must apply their energies. The menfolk must be cooperative in ushering in a change in the very thinking in the society. They should stop devaluating women's work or treating them as property or objects of lust, exhorts the auther.

IN BIHAR, WOMEN ARE AT CROSS-ROADS ewildered ! Reasons being, irrational social and ligious constraints, wrecking their personality and eativity The lot of Bihar's women consists of many ategories.

We can therefore identify, only in general terms, iose specific features of the social order which put ocial and religious constraints upon female initiative, er assertion for equality and recognition of the value nd utility of her services to the state and nation

Their role

Since ancient ages, Bihar has produced many earned, dynamic and devoted women. A few examples ay suffice here. Princess Sanghmitra, spread the essage of Buddism far and wide. Philosopher Bharati, hallenged even Shankaracharya— the inaugurator of dvaita cult. And Prabhawati Devi's presence, near the eath-bed of Kasturba was earnestly desired by andhiji himself. Even today within the oppressive onstraints of irrational religious and social traditions ihar has been able to produce many efficient women as gislators, State Ministers, Cabinet Ministers, overnors, many I.A.S., I.P.S. and officers of high ranks other services. There are women painters of globally cknowledged Madhubani Art, Kathak dancers of orld fame and dedicated social workers who prefer to emain anonymous.

Oppressive social order

But what do we find today in Bihar ? Is the social order not oppressive upon women ? Is it not accentuating decline in women's status ? We must go into the depth of the root causes. These may be identified as— increase in senseless violence in society, expansion of feudalistic mentality on all levels, intensification of religious ritualism, undeveloped state of education, rise in illiteracy rate and low ebb of urbanisation and industriallisation.

Violence against them !

Violence in all walks of life in Bihar has today become routinized. The weaker sections of the society, including women, are easy targets for all kinds of tortures, exploitation and atrocities Those engaged in aimless violence perceive women as objects of lust, bonded labour, source for extortion of dowry in marriage and an easy tap of regular income, if she is working for livelihood.

Bihar, a feudalist society

In the society of Bihar, economic, political and the educational subsystems are thoroughly drenched with feudalistic ideas. Everyone seems to want benefits before his turn and with least labour. All ceremonial occasions glitter with vulgar display of wealth. Women

in such a mentality can only be a decorative piece, who can bring dowry from her parent's home to fill her "in-laws' store-house. Marriage becomes an opportunity, to extort and accumulate wealth at the cost of bride's parents. The bread earning woman is not only tolerated in Bihar today but also desired because she adds wealth to the husband's income. But does she have any say on spending her own earnings? Perhaps not! Then, is she not a bonded labour? What happens at her work place? Her efficiency and work are devalued as compared to men. Her promotional avenues come under the constraints of such attitude towards women.

Irrational social and religious ritualism have made the atmosphere in Bihar more cruel to daughters and daughters-in-law. Roop Kanwar of shameful Deorala Sati-sacrifice was a girl of Ranchi-where she had her schooling. According to some reports in the news papers her relatives in her parental house felt proud of her conduct in being a 'Sati'. This is horrible! What an irony against women in the fag end of twentieth century!

Women are insecure

All these factors are throwing Bihar's society into fatalism. Women in general are feeling insecure about their future and therefore are running to sooth sayers, astrologers and sadhus. In such an environment can rationality be encouraged and can a scientific temper be created? The chances seem to be remote because women of Bihar are today mostly dependent upon their menfolk.

Why this condition

There are several factors increasing this dependence of women upon men. These are undeveloped state of education, high rate of illiteracy, lack of opportunities for technical training and further lack of infrastructure and institutions, specially suited for women. Very few women in Bihar are equipped to avail the economic opportunities provided by our political system.

I must now briefly touch upon some incidents reported by the news media, upon which I have based my analysis of the irrational social constraints upon women in Bihar. I must impress upon the menfolk that in many cases women are not treated as human beings at all. There have been instances, according to press reports, when in Care-homes and Mental Asylums, the women inmates were neither cared for nor treated properly. Instead they were made objects of lust and sex satisfaction.

And atrocities!

Gang-rape of women of all ages, as reported in dailies, recently has sent shudders through the spine of Bihar.

Now coming to the women in lower economic strata about whom it's said that they have fewer social constraints to face compared to the middle class women. In this context, I must specially say a few words about the women of scheduled tribes because tribal communities in Bihar have been singled out for equality between sexes. But the stark reality of poverty and lazy drinking men around them, have [illegible] women the total tiring burden of sustaining their families. Against the tribal women there are other kinds of discriminations in their society. These women canot own land. Land can be owned only by men. And who is suspected of the practice of witch-craft? It is the women only. For witchcarft they are tortured and ofen killed. These tribal women, like other labour classes of women, are also economically exploited by their employees who make them work in inhuman conditions and pay them lower wages as compared with male labourers.

The neglect

In Bihar, social controls are more tight because of the low ebb of urbanisation, and industrialisation. Though many of the public sector industries of the nation are in Bihar, yet the local populace, including women, have been by-passed. They have not felt the shock of industrialisation which loosens social grips over women.

Marriage, the only aim!

There is no 'women work force' to be reckoned with. Marriage, moreover, remains the ultimate career for women, Whether they are doctors, engineers, teachers, members of All India Services or business executives. These factors increase women's dependence upon men. In one of the research surveys undertaken by social scientists social constrainst were perceptible even upon th I.A.S. women of Bihar. Not all of them wished that their daughters should go for All India Services. Fresh social constraints seem to have come to grip with other sections of women also. I shall mention one. Muslim women in this State are being brought under un-Islamic custom of dowry.

Role of voluntary organisations

Several women voluntary organisations like All India Women's Conference, Council of Women, Centre for Women Development Studies and others in Bihar are engaged in thier attempts for removing the irrational social and religious constraints upon women. They are carrying out programmes for eradication of illiteracy. They are imparting legal literacy to the younger generation. They are increasing skills of women by teaching them arts and crafts and are securing economic opportunities for them. Due to these and other efforts on Governmental and non-governmental levels, some changes are perceptible in the younger generation of men and women. Yet the road to liberation is very long. Much has to be done and with greater speed.

Stop devaluating them!

The remedy lies in helping the masses of women to gain self-confidence and make them come out of the protective shell of males. Towards these objectives, Government, voluntary agencies, women in 'power positions' and the youth must apply their energies. The menfolk must be co-operative in ushering in a change in

(Contd on page 25)

How can we improve socio-economic condition of women

Dr. P.C. Mohapatra
B. Eswar Rao Pattanaik

Women share a two-fold burden-one on the domestic front and the other on the economic front-in the socio- cultural and economic development of the country. In spite of their vital and substantial contribution, they are underestimated and discriminated againt in all walks of life. Only an integrated approach, where the three-fold strategy of education employment and health is implemented in letter and spirit, can uplift them from the depth in which our thinking and policies have landed them. Any further delay, feel the authors, is bound to tell up on our socio-economic development.

THE ECONOMIC ROLE PLAYED BY WOMEN cannot be isolated from the framework of development. They constitute almost half of the population in our country and the contribution of this population in the socio-economic development, particularly in the rural areas has been vital. Around 77 percent of the total famale population of the country lives in rural areas. Out of 45 million main women workers in the country, as many as 39.6 million (i.e. 88 percent) live in rural areas and of the 18.6 million marginal female workers 17.8 million (i.e. 95.7 percent) are rural workers as per 1981 census. Economic classification of main workers based on 5% sample data of 1981 census indicates that 46.2% women were working as agricultural labourers as against 19.6% of males. Percentage of women engaged as cultivators was 33.2 and in household industries 4.6, as against the male percentage of 43.7 and 3.2 working in the same sectors respectively. Most of the women in rural areas are engaged for the major part of the day in household work and many of them make time to take part in various economic activities of the family. In rural areas women perforn a major part of agricultural operations like breaking clods of earth, manuring, weeding, transplanting, harvesting, threshing and winnowing. Women do most of the work of caring for the dairy animals and marketing of their products. They also lend a helping hand in other small industries like rope and basket making, pottery, handloom weaving, food processing etc. Thus, the burden shared by the women for the soico-economic development is two fold, one, on the domestic front and the other on the economic front. They are too much over-burdened because of the multifarious duties to be performed by them. The difficulties of getting drinking water, fuel for cooking, health services etc. stand as obstacles to run their domestic front smoothly. Besides, they have to adjust in a number of adverse situations while performing economic activities outside their home. According to an

I.L.O. estimation, women perform one third of the world's counted labour. Thus, it is a fact that their contribution to the economic growth of the society is quite substantial.

Discriminatory thinking/policies

But in the rural areas the activities performed by women are generally either undervalued or not at all taken into account. A number of reasons, substantiated by case studies of various third world countries, indicate how the contribution made by women for economic development has been undervalued from time immemorial "The ideological assumption about women's position in the family, that women as housewives must be dependent on their husband's wages, is used to define women's social position even in cases where women do not have husbands, or are the sole earners." Even in cases where many of these workers are family bread earners, they are regarded as 'inactive labour' or 'secondary workers' or 'dependents' simply because they are regarded as 'housewives.

Access to skilled jobs are often sex-specific In many Third World Countries the male dominated trade unions often reserve the 'skilled' jobs for men and therefore the range of jobs available to women has been reduced.

Similarly, access to education in low income families is mostly sex-specific. It is frequently the male child who continues with his education while the female child drops out to substitute work for schooling or to reduce the financial cost of schooling within the household unit. The sex-role pattern is reinforced by parents, friends, teachers and administrators, and has caused differences in the behavioors of the two sexes, to the advantage of the males, pertaining to education The lack of lucrative job opportunities as well as low level of remuneration of women workers acts as deterrent to families to invest for long period in education of their daughters. It is often argued that because women are not expected to get high level of employment, there is no need to give them higher education

Discrimination against women exists not only in education but also in employment opportunities Due to lack of training and practical job experience, the women are treated as less productive and are often denied the opportunities of employment in highly paid jobs.

The traditional method of interpreting women's productivity is also responsible for under-estimation of the extent of employment and unemployment. In our country the labour put in by women is often evaluated in relation to male labour. In a well known study of poverty in India, the earning capacity of a female worker has been equated with two third of that of a male worker. National sample survey has computed one woman unit of work equal to only one-half unit of a male labour. The underlying assumption of such conversions is that female labour productivity is lower than the same work done by man. On this basis, a female worker always gets lower level of wages than that of a man doing the same work for the same period. This assumption is untenable, in as much as in many occupations woman have equal productivity and yield equal market value. If ploughing done by a woman is said to be less efficient than by a man, a man's productivity in transplanting would be equally less than that of a woman.

Besides, women labour force have suffered from invisibility, peripheral status and poorer access to resources. The influence of men's roles in extra-household institutions and intra-household decision-making process has further subordinated the position of women in our society. The cultural bias as to what constitutes women's work, certain religion related practices such as purdah have imposed general restrictions on the female participation rate. These and many other findings were discussed at the I.D.S's international conference on the subordination of women, held a decade past. The conference participants agreed that "much current thinking on women and development and many policies held both by international agencies and national governments, at best reinforce gender asymmentry and at worst tip the scales further against women. "This calls for a broader definition of development," linking the notion of economic betterment to the promotion of new forms of non-hierarchical human relationships ....so called development which throws the balance of power further towards males.. ... ... must be condemned as.... .... leading to ....the further distortion of human relationships and the under-development of human capacities."

A case study

The present paper is a study of Narayanapatna block of Koraput, one of the backward districts of Orissa. The authors want to acquaint the reader with the contribution of women to the development of a rural economy in a hilly and inaccessible region. The analysis may be important both for analytical and policy related reasons

Narayanpatna was part of Parvatipuram sub-division of Visakhapatanam district of the erst while Madras Presidency It was during this time that the Telugu speaking merchants known as Kumatis, of Parvatipuram and other neighbouring areas came to Narayanpatna agency areas for purposes of business in forest products and crops grown by the tribal people and prospered In 1936, when Orissa State was formed, Narayanpatna was cut out from Parvatipuram taluk and merged in Koraput district of Orissa State.

Narayanpatna block, which is at an altitude of about 1,000 feet, is situated in the south-eastern part of Koraput district. The block covers an area of 532.48 sq. miles. According to 1971 census the total population of the block is 25,840. The block has the largest concentration of tribal population. The percentage of scheduled tribes to the total population of the block is 82.16 per cent which is much higher than that of the district average of 56.34 per cent.

Women constitute nearly 50% of the population of the block. As per 1971 census 49.57% of the total

population of the block was constituted of women. However, out of the total workers in the block only 10.76 per cent were female workers. The exclusion of gainfully employed females, for whom it was a secondary activity, in 1971 census is the cause of this drastic reduction of female participation rates.

Agriculture was the main occupation of the study area. As large as 89.75% of the total workers were engaged in agriculture and allied activities including livestock, forestry, fishery, hunting, plantation and orchards. Only 10.25 per cent of workers were found to be engaged in non-farm activities, i.e. house-hold industries, construction, trade and commerce, mining & quarrying, transport, storage and communication and other services.

It is difficult to measure the female participation rate in the various economic activities of a study area. A correct measure of agricultural participation and of the division of labour by sex, must be based on an accounting of the actual number of days of agricultural work performed by different household members over the agricultural cycle of the region.

Due to lack of time and resources, the data were collected during busy agricultural operations, i.e. sowing, transplantation, weeding, reaping and harvesting operations. The number of days and amount of time spent for field preparation and other non-farm activities by the workers of the sampling households was collected through survey method, with the head of the household recollecting the information from his memory. Inspite of the best efforts made to elicit correct information by careful interview, it would not be correct to assume that lapse of memory on the part of the respondents was fully overcome. However, the efforts made to study the female participation rate in such a tribal dominated hilly and inaccesible area would definitely give us some concrete idea about the subject and help others to take interest for further research on the subject.

The multi-stage random sampling was followed in the field investigation, Five percent of villages i.e. seven villages were selected in the block. For each sampled village a list of all households was prepared and 25% of households from each village were selected through systematic random sampling procedure giving a total sample of 124 households. The data collected relate to 1986-87 agricultural year. In order to understand the impact of the development programmes initiated by the Government on the participation of female workers in the socio-economic development of the region the data collected by one of the authors in the same block in 1977-78 was taken in to account. This data was collected from 143 households.

Characteristics

Agriculture is found to be the main source of livelihood of the study area. Podu cultivation is still followed by about 17 percent of the cultivators of the block. The physiography of the area does not allow improved farm practices in the area. Data on the pattern of land ownership, cropping pattern, yield per acre and intensity of irrigation of the block indicate that the agricultural practices adopted are more crude and primitive than in other developed blocks of the district. The sample survey-1978 made in the study area indicates that 70% of the cultivating households owned less than 5 acres of land and only 6% of the cultivating households owned more than 10 acres of land. The situation remained more or less the same in the year 1986.

The agriculture of the block is subsistence oriented. In respect of the lands cultivated by the Sampling households 94.2 per cent of the gross cropped area is covered under paddy, ragi and Juan. Cash crops like pulses and oilseeds covered only 5.8 per cent which is much less than the corresponding figure of 21.90 per cent for the district as a whole.

The landless households among the sampling households in 1978 was as large as 53 per cent. However, due to the supply of land to the landless under the I.T.D.A. programme the percentage of landless families have been reduced to 19 in 1986-87.

The average size of land holding on marginal farm was 1.45 acres, on small farm was 4.16 acres and on other farms was 9.5 acres. On the whole the average size of the farm in the region was 2.29 acres among the cultivating households. Farmers maintain cattle mainly for fodder and ploughing purposes. The average number of cattle unit per house hold was 2.05 in 1978 and has increased to 3.41 in 1986. Milking though practised was not very common among the households of the area.

The average family size which was 4.43 among the sampling households in 1978, has increased to 4.96 in the sample survey of 1986. Table-I-indicates the composition of male and famale workers in the study area. On the whole the total workers in the study area increased from 54.67% in 1978 sample survey to 67.69% in 1986 sample survey. The percentage of male workers increased from 54.22% to 43.65% during the same period. There has been an increase in the average number of workers per family i.e. it increased from 2.41 to 3.36. The same trend is noticed among both the sexes. The average number of male workers per family increased from 1.32 to 1.89 and that of female increased from 1.09 to 1.47 per household.

Role of education

Education plays a positive role in the eradication of rural poverty and un-employment. It enhances the knowledge and skill of the workers, the chance to expand non-farm activities, helps better understanding and rational use of farm resources and makes one confident to adopt new-farm technology. Education also helps women to be aware of their rights and responsibilities for the development of the nation as well as the region in which they live.

Table-2, given below, indicates that there has been a significant improvement in the percentage of literacy between the two survey periods in the study area. The percentage of literacy has increased from 2.69 to 25.64%. The percentage of male literacy has increased from 4.29 to 35.91 and that of female has increased from 1.01 to 1[illegible].33% between the period 1978 to 1986. But compared to the average literacy rate of the State i.e. 34.12% male literacy of 46.90% and female literacy of 21.11% the lite[illegible]y rate of the block does not appear to be promising.

It is evident from the table that the level of education among the workers in the region under study is low. The position is still worse among the women workers. The women workers do not have even access to new skills imparted through the extension and community development programmes. Therefore, they have virtually no choice but to accept life as it is, made up of a combination of household and agricultural tasks. Many of the female workers do not hesitate to work as labourers either on the road-side or on other's farm on daily or weekly wage basis.

Sources of earning

It is difficult to make an accurate calculation of the percentage of contribution of male and female workers in various economic activities in an area. However, an effort has been made in this respect in the study area by taking into account the average number of days put in by the workers in various economic activities. In the study region male workers performed a major part in the farm works like field preparation, manuring and sowing while the female workers performed a major part of work in transplantation, weeding, harvesting and threshing operations. Excepting a few women workers among the cultivating families possessing more than ten acres of land, all the famale workers were found to be engaged in farm works including those of field preparation, manuring and sowing.

The female workers were also found to be engaged in the other economic activities like collection of minor forest products, construction of roads and buildings, quarrying, household industries and other services. Table-3 indicates the sex-wise percentage of contribution made in various economic activities.

It is evident that the contribution of men workers in the crop production is 60.80% and that of women workers 39.20%. The lack of mechanisation in a traditional agricultural society requires all work to be done manually. Therefore, requirement of human labour is relatively more per unit of land. Lack of capacity to hire male labour demands co-operation from all family members including the women folk. In some cases even children below the age of 14 do light agricultural work.

Female workers have started playing an important role in the non-farm activities like construction, quarrying and business sectors. Purdhah system, which is quite common in rural India. is not found in the district particularly among the tribals and other backward classes. The explanation given by Boserup is relevant here. Boserup came to the conclusion that the seclusion of females is related to the nature of the economy and the demand for female labour. In areas where mechanisation in agriculture has replaced human labour, the demand for female labour has been reduced to a greater extent. but in the area under study the primitive nature of the economy needs the co-operation of female work to a greater extent. Similarly the low standard of living in the area makes it necessary for women folk to even cooperate in other economic pursuits to some extent.

Strategy for women's development

A series of social legislations have been enacted from time to time for raising the status of women in the country. During the plan period, general as well as special programmes have been taken up for the welfare of women and also to meet their special requirements The threefold strategy of education, employment and health has been rightly recognised by the planners to raise the women in the socio-economic ladder of the society. Despite the various development measures, women have lagged behing in almost all sections.

On the basis of the present study the following points emerge which can be taken into consideration for framing a suitable strategy for women's development in rural areas.

A number of anti-women cultural and religious practices restrict women in the use of technology. But certain common technologies which are essential for rural development are amenable to transfer to rural women. For instance, the technique of handling a household methane system (Gobar Gas Plant) would help a village lady for cooking, heating, lighting and using good fertilizer in her cultivable lands. The introduction of such technologies may pose innumerable difficulties at the initial stage. However, once the village lady starts getting the real advantages of such technologies, it would be easy on the part of planners to achieve the desired goals of economic development.

Besides the household activities, the rural women workers are acting as catalytic agents in the development of the economy by their active role in small industries like doll making, pottery, handloom weaving, broom making, basket making, bee-keeping and sericulture. They are also engaged in a host of non-farm activities like palm-gur and cane-gur processing, processing of cereals, goat and sheep rearing, dairying, needle work, embroidery, tailoring etc. However, such women face problems of credit, raw materials and marketing facilities. Sometimes the women folk are not able to indentify any bankable schemes that would suit them. They often find it difficult to get loans from Banks as land records mostly stand in favour of male members.

Such women need to be identified and should be provided with credit facilities at their door steps. Necessary skills and management training are to be

imparted to them at places where they can conveniently learn the managerial skills and handling of necessary machineries preferably through women officials. Imparting training about a variety of innovative labour saving techniques suited to their needs and local resources would also help to develop labour saving techniques and foster development of rural women.

Education, knowledge and skill adds to one's earning capacity, widens the base for job opportunities and renders possible the organisation of women for their rights and inculcates in them the small family norm. The programmes of universalisation of elementary education has to be suitably directed towards higher enrolment and retention of girls in schools. Besides literacy programmes would have to be expanded particularly for the women in the age group of 15-20 years who have not done their formal schooling earlier.

There is a considerable discrimination between male and female workers as regards the amount of wages paid. In most of the States, the female wage rate varied between 70 to 80 percent of the male wages. This situation calls for formulation of compreshensive laws regarding wages and their effective implementation, to protect the interest of women labourers. Social security benefits have to be extended to the unemployed and under-employed female workers.

It is high time that an integated approach was formulated for the over all development of women folk to enable them to participate in the socio-cultural and economic development of our country. The problem of women's development should constitute an important segment of planning process. Any further neglect of this important issue would stand in the way of economic development of the country. □□□

TALBE-I

Age & sex-wise distribution of workers and non-workers among the sampling households of Narayanpatna block 1978-1986

Age Group and Sampling year		MALE		FEMALE		TOTAL	
		Workers	Non-Workers	Workers	Non-Workers	Workers	Non-Workers
Below 14 Years	1978	16	133	9	124	25	257
	1986	3	84	—	108	3	192
14 to 60 Yrs	1978	171	11	145	15	316	26
	1986	232	—	182	—	414	—
Above 60 Yrs	1978	2	1	2	2	4	3
	1986	—	4	—	3	—	7
Total		189 (54.78)	145	156 (45 22)	141	345 (54.67)	286
		235 (56 35)	88	182 (43 65)	111	417 (67.69)	199

TABLE 2

Educational attainment among the sampling households in Narayanpatna block

Year of Survey	Illiterate		Primary		Secondary		Higher Secondry	
	Male	Female	Male	Female	Male	Female	Male	Female
1978	320 (95.81)	294 (98.99)	14 (4.19)	3 (1.01)	—	—	—	—
1986	207 (64.09)	251 (85.67)	62 (19.2)	31 (10.58)	39 (12.07)	11 (3.75)	15 (4.64)	—

(Contd on page 25)

Make them equal partners in development

Tushar Kant Mishra

In this piece, the author surveys the role of Indian women in the social and economic spheres and the status they enjoy. He strongly advocates for their increasing participation as entrepreneurs to enable them to play their due role in our growing economy. For this he calls for special incentives and programmes and imparting of special training and other facilities to women and thus help them to set up their own enterprises.

IT IS HIGH TIME THAT the developing nations utilized their women force to the optimum level and realized that women is not merely a passionate, charming, delicate creature who can love, sing and dance, and dress and serve; it is not just a lovable, decorable, compatible and pleasurable asset; it is a being who can comfort and counsel; one who can reason and reflect, sense and judge, create and educate, one who can assist and share; one who can ably aid, and strengthen the menfolk in the act of development.

It is an endless source of power. It is a formidable force which can change the complexion of growth, rejuvenate the factor resource of development, absorb the strains of modernization and fight the forces of destruction and destabilization at work. It can play a more creative, positive and challenging role in nation-building. It is imperative to note that men alone can't break the shackles of poverty, unemployment, inequality and population explosion. Active and equal participation of women in accomplishment of this herculian task is indispensable. Further, it is an illusion to believe that the 'trickle-down' effect of development would automatically benefit women. Women's concern must be incorporated in developmental plans

Best manager

Women's participation in plans and policyformulation is vital to their success; for it is women who are most intimately connected with the basic needs of their families, be it food, firewood or water. They can even prove vital in the process of implementation of plans Woman, as mother, in the household is possibly the best example of a manager.

She performs the function of finance management while preparing and following the domestic budget, marketing function in making purchase decision; production function in providing food to the family members: and personnel function in keeping peace at home and a harmonious relationship among members of the house. Woman in the society, therefore, has to be accorded the status of a mother in this sense, if it stands for promoting peace and prosperity. Nation, in its idealistic form, is nothing but a larger projection of family No wonder how much progressive a man is, he can't succeed completely in this enterprise unless he is aided and supplemented properly by a women.

Status of women

Women who constitute half of the world's population, by virtue of an accident of birth, perform two-thirds of the world's work, receive one tenth of its income and own less than one hundredth of its property, admits the Report of the Secretary General of the United Nations at the World Conference on Women at Nairobi in 1985. Merely providing certain rights and protection from social inequalities in statute books does not solve the

issue of their socio-economic status. Measures to improve the status of women and their quality of life must be wedded to various economic developmental programmes. Further, we also need to give special attention to the health, nutrition, education, fertility and other human capital aspects of women. In India, status of women suffered a great setback during the Mughal period. A women who was a symbol of purity and chastity was disgraced. She was considered to be an object of lust and enjoyment. In the medieval age, women came to be maltreated. She was sold and bargained in the bazars openly. After the partition, women became more matured and aware of their rights and duties constitutionally. India has no discrimination on the ground of sex Rather, a number of Acts have been passed to protect the women's interests. Still Indian women continue to live under the stress and strains of male domination that manifests in the form of various kinds of cruelties to them.

Role of NAM

Despite of statutory rights and protection discrimination against them is prevelant. Our Prime Minister, Shri Rajiv Gandhi, addressing NAM Conference in Delhi in 1983, rightly said-"Male superiority has become, in a way, a vested interest. And like all vested interests, it is damaging humanity. As a group, women are perhaps the largest under-priviledged group in the world. And we must fight to remove this disparity."

The conference with one voice recommended that NAM should call a meeting on women every five years so that the monitoring and reviewing, the reminding and nudging would continue. Major problems facing Indian women are: poor health, malnutrition, illiteracy, unemployment and social drudgery.

Education of women

Education is one of the most powerful engines in liberating women from the yoke of the past. Though the female literacy rate rose from 18.7 percent in 1971 to 24.8 per cent in 1981, the absolute number of illiterate women increased from 215 million to 241 million in the same period. Equally alarming is the widening gap between male and female literacy. For every 1000 illiterate men the number of illiterate women increased from 1,330 in 1971 to 1,427 in 1981. While the dropout rate of girls remained static at the primary and secondary levels it has actually increased at the secondary school level. However at the level of higher education the gap between men and women have narrowed. The number of girls studying in engineering or technical subjects is limited. They are largely confined to art, literature, home science, dress-making and embroidery If education is to play a dynamic role in liberating women, the content and orientation of courses needs to be restructured. New job oriented courses at ITI, polytechnics vocational centres and hostels have to be opened in an elaborate and diversified manner.

The importance of women's education was very aptly reflected in the report of University Education Commission 1948. It underlined, "If education has to be limited to men or women, it should be given to women, for then it would more surely be passed on to the next generation". Indian constitution confers on both the sexes equally the rights of access to educational and employment opportunities. The explanation, therefore, lies elsewhere for the anomalous situation in which lesser girls and women get education. Perhaps, the inadequate supply of women teachers, weak educational infrastructure and orthodox attitude of the community might suggest part of the answer.

Women as entrepreneurs

Woman entrepreneurs represent a class of women who are exploring possible avenues of active participation in the economy. A great number of women in India have taken up to run industries of their own. Handlooms, handicrafts and cottage industries, Khadi and village industries play a pivotal role in providing work opportunities to women. Khadi spinning, cereals and pulses processing, cottage-matches making, carpet weaving is mostly done by women. Nowadays, elite women in the cities are making a landmark in the non-conventional fields such as consultancy, marketing, advertising, manufacturing (specially electronics), garment exporting, interior decoration and designing, beauty clinics, handicrafts, textile-printing, food processing, etc.

The main problems faced by Indian women entrepreneurs are lack of adequate finances, technical knowhow, non availability of raw-material, inadequate marketing facilities, lack of technical and managerial skill, etc. Though, these problems are not uniquely faced by women entrepreneurs only, women deserve special attention and protection from the government on account of their relative immaturity in the business world. They can make a significant dent in the small scale industries sector in India which is making (appreciable) contribution to the national economy.

In recent years, a marked change in the category and class of entrepreneurs who are coming forward to small industries has been noticed. In this endeavour women, who have also been getting increasingly involved, have moved from traditional industries like papad, pickle and ghee industries to sophisticated industries like electronics, software and consultancy. This is undoubtedly a healthy change and government should try its best to remove hurdles in such a change over.

Apart from providing more opportunities for education and training to women, Government should pay special attention to their specific problems like non-availability of accomodation, bureaucratic hurdles in obtaining finances, existence of ill behaving labour and sales inspectors, quality control and marketing problems, huge consultancy charges, sizeable legal, procedural and operational formalities etc.

There should be special incentive programmes to attract more women in the field. Government policies towards special and institutional finance, interest

subsidy, concessional finance, margin money assistance and technical and managerial support, government purchases programmes, Entrepreneural Development Programme, etc. would go a long way in this direction if dealt with all seriousness and sincereity.

Orientation of welfare

The voluntary organisation engaged in the welfare of Indian women need to reorient their programmes, policies and functioning so as to play a more positive role in enthusing creativity, fostering dynamism and promoting self-reliance among women. Even for deriving fruits of development and benefits of welfare schemes adequately they have to stand on their feet and join hands with men in the pursuit of development. Women welfare organisations, instead of just sympathising and wiping their tears, should pat and cheer them up for joining the mainstream of national reconstruction. They have to assume the position of a partner in development and not detractor of development. Further, they need to march together with men as equal partners and not as competitors and rivals. Existing social cruelties and drudgery is an offshoot of backwardness. Such practices have no place in a developed society. If the welfare organisation feel that women in India are debenture holders then it is high time that they helped them convert into equities, which are undoubtedly convertible ones.

Government Policy

The government's draft national perspective plan for women for the period 1988 to 2000 AD has mooted a wide range of proposals, including job-reservation for women in anti-poverty programmes, wholesome projection of women in media and provision of thorough-going legal safeguards to women in various endeavours. It calls for all round measures to ensure that women "catch up with the mainstream" of national life by the turn of the century. The plan also comprises national communication policy on portrayal of women and code on projection of women in the media. It has put special focus on rural women who suffer most on account of socio-economic discrimination. It has also suggested creation of special department in the Ministry of Women and Child Development to deal exclusively with the enforcement of law for women. Women's Development Corporation is to be set up in all the states and union territories to promote employment for women belonging to poorer sections of the society. It is supposed to provide them viable projects, financial assistance, technical consultancy and marketing support.

Uplift of rural women

Government has taken the initiative to launch through the Ministry of Rural Development the Scheme for the Development of women and children in Rural Areas (DWCRA) at district and block levels. UNICEF is making a major contribution to its resources. The Prime Minister, Shri Rajiv Gandhi, regarding women's welfare, once said, "There had been a number of agitations for women's rights, but like the Satyagraha, launched by Mahatma Gandhi, these agitations should be accompanied by constructive programmes. We must mobilise all our efforts to develop women. As far as skills are concerned they are equal, and in some areas better than men." Apparantly, there seems to be no lapses on the part of Government, so far as legislation of Acts, formulation of welfare plans and launching of various women developmental schemes are concerned; lapses and shortcomings lie on the part of implementation of the various enactments, programmes and schemes.

According to the observation of the Director General of ILO, Francis Blanchard, "Though countries like India, China, Indonesia, Pakistan and Sri Lanka have enacted labour legislations and have special departments for women's welfare, yet the real problem lies in the implementation of these policies to bring about practical improvements in women's social conditions. According to him, the areas which need to be tackled are employing of women in growth sectors, where they are taught specialized skills and have opportunities to rise; provision of child care services, cushioning repercussion of new technologies or sectors employing large number of women, participation of women in organised labour movement and the extension of social protection to sectors outside labour legislation Keeping above notion in view, to accelerate the involvement of women in the development process and to ensure their status as enshrined in the Constitution, a National Committee on Women, headed by the Prime Minister, Shri Rajiv Gandhi, has been constituted recently. The Committee would advise the Central and State Governments on the policy, legislative and administrative measures necessary for removing economic and social inequalities affecting India women. It would also suggest ways and means to enable women to achieve their inherent potential and utilise their capacity to contribute to the development process and to review the progress of implementation of policies and programmes designed for women welfare. From the description of the Government policy on women above, it becomes clear that Government is committed to remove sexual discrimination in society. The problem is just of expeditious implementation of such policies. □□□

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Secretaries to review control of expenditure

The Government has constituted a Group of Secretaries to review the control of expenditure during the fiscal year 1988-89.

The Group, headed by the Cabinet Secretary, Shri B.G. Deshmukh, has among its members the Secretaries of Finance, Expnediture, Plannihg, Personnel and also the Secretary to the Prime Minister.

The Group has been asked to suggest ways and means of controlling expenditure and also the procedure to be followed during the current year to avoid any deterioration in the overall budgetary situation.

The Group is expected to submit its findings within a period of six weeks. □

No more suffering: no more subjugation

Shashi Mehta

The author here talks of the various kinds of atrocities and discrimination that women are being subjected to increasingly. Despite several laws and recent enactments, their lot is no better ! Is the male chauvinism behind all this ? Yes. But the author feels 'the winds of chage are beginning to blow. Woman has taken the first step forward. She has started questioning the mental torture, low status, the denial of education and the opportunities to her. She wants to live and live respectfully.'

INDIA HAD A WOMAN PRIME MINISTER. Women adorn top positions in legal profession, in administrative service, in police force, in business and media. Yes, it would seem India is a progressive country where men and women stand shoulder to shoulder in running the country, work hand in hand to run their homes. But then these are stray cases, this is just a fraction of reality. The position of women may have improved since the time of Manu, but are women enjoying the same status as men in the conservative Indian Society ? To every women who is said to be occupying a prestigious seat in our national life, there are thousands of others forced to live a life of humiliation and oppression. Cases of rape, bride-burning, eveteasing and sexual assault continue to haunt us. Despite the oft repeated view that the increasing incidence of crimes against women is probably due to the increased awareness about such atrocities and registration of more cases the fact remains that such shameful acts are being perpetrated on women in both rural and urban areas, against both rich and poor women and against both young and old. Harassment is both direct and subtle. In fact the subtle ways of oppression like mental torture, deliberate low status granted to women, denying of education to the girls are even more dangerous. The Home Ministry figures testify to the sad state of affairs in the country.

Alarming situation

As many as 6,356 cases of rape, 8,440 cases of kidnappings and 837 cases of bride-burning were recorded in 1985 throughout the country. There had been a marked increase in the rape, dowry death and kidnapping cases in 1986. And this is official admission. For every one case that is recorded, there are scores of others which go unrecorded merely because of the social stigma attached to such crimes.

While Rajasthan recorded the highest number of kidnapping cases-1469-Uttar Pradesh witnessed the maximum number of dowry deaths-323. Madhya Pradesh enjoys the dubious distinction of topping in rape cases-1428. One hundred and thirty six brides were burnt to death in Maharashtra, 33 in Delhi, 88 in West Bengal and 99 in Haryana.

And all this is despite the stringent provisions of the Dowry Prohibition Act, Which makes it clear that the law has far too many loopholes which are blatantly exploited by the culprits !

Why then, despite the awareness, despite the dozens of legislations protecting the rights of women, these atrocities continue to be heaped on women ? Women without whom men cannot survive, women without whom there would be no procreation and hence no future, women who keep the home fires burning—why are they treated as creatures, abused and humiliated ? Forty years after independence, we still have a society which gives undue importance to the male. Recently a Delhi Hospital witnessed a noisy furore created by a woman who alleged that her male baby had been exchanged for a female baby. Why did the alleged baby swap take place at all ? Merely because someone was so keen to have a male child that he/she decided to stoop to any low level to acquire one !

Preference for male child

The preference for a male child often results in equivalent disgust against the girl child. Till a couple of years ago, we heard of female infanticide, where the moment a girl was born, she was butchered to death by none other than her own parents and family just because they did not want to bring up a girl.

A more sophisticated practice is amniocentesis, wherein the sex of the unborn child is determined in the 4th-5th month of pregnancy and there are hundreds of cases, where the female foetuses are done away without as much as batting an eyelid. A survey in Bombay found that of the 1000 abortions that took place in a hospital, 999 foetus were female. Can something be more shocking. The Maharashtra Government has belatedly banned amniocentesis tests but unless the Centre evolves effective measures to control this crime, it will be difficult to end this outrageous practice.

Why this discrimination

The doctors favouring the killing of female foetesus say it is better for a female to die before seeing the light of this world, rather than be unwanted and then subjected to atrocities. But then, why should we assume that the moment a girl child steps into the world she is going to face the worst of crimes. Why after forty years of independence where women fought as hard for the freedom as the men, do we still accept this discrimination? There are cases galore about women not feeding their female babies properly. The son gets milk, education and health care, but the son's sister is relegated to doing the odd house jobs and looking after the brother rather than go to school herself or eat proper nourised food. But no one protests. All the the girl is groomed up for is that she must be totally dependent on her father, her husband, she must bow before them, never question their decision—in fact, not think for herself at all. And conditioned not to think for herself the girl indirectly helps her enemies to bully and bulldoze her for the rest of her life. This also explains the shocking and unbelievable suicide by three sisters in Kanpur recently. Three educated sisters from a respectable fairly well off family, brutally end their lives just because they could not cope up with the dowry demands being placed on their salaried father. But, is life so worthless that one ends it because someone else- a father, a brother cannot provide dowry to hire someone into marrying her. ? Wish the young girls had made atleast one attempt to fight the system, gain economic independence and run their lives. Probably a good career could have made up for the bitterness. This also brings us to the most widespread form of harassment of women that is, in office and in their jobs. No, they are not forcibly raped or kidnapped or physically assaulted openly in the offices, but the kind of torture they have to face is no less vicious.

Poor Victims !

It is not rare to see a young needy girl being forced to give in sexually to her superior under the threat of being dismissed. Girls travelling in public transport recount the harrowing experiences at the hands of eve-teasers, Bottom pinching, deliberate physical contact are every-day instances. However, it is a positive sign that after the break up of the joint family, the girl had the courage to come out and work and be gainfully employed thereby relishing the pride of being a contributor to the family kitty. But at what cost ? She remains emburdened with all the possible household chores-looking after the house, the children-including the husband— the cooking, cleaning and washing. And on top of it the daily bickering, aspersions, character assassination, mental torture-just because she is working ! Isn't this a double crime on the women ? Whoever called her the weaker or the fairer sex ? She does double work with not a word of sympathy ! No legislation has been able to stop the discrimination against her-and the 'her' in India is not 100 or 200 women-but over 330 million. She doesn't enjoy the right of equality, not even essential care and she gets no support from the adult women. The legislations pertaining to women include the suppression of Immoral Traffic in Women and Girls Act, 1956. But there are more rapes and prostitution cases. The Maternity Benefit Act, 1961 is there; but 90 per cent of women employees do not get the benefit; the Equal Remuneration Act, 1976 exists, but which doesn't even ensure equal wages on paper. Then, there is the Protection of Civil Rights Act, 1976, but one will have to imagine a civil right that a woman is able to enjoy.

Right to property

The most important personal law-the property right-which alone could go a long way in improving the status of women by granting her the much needed economic independence is probably the most defied. For one, the women are still unaware of their rights regarding property. Even where they are knowledgeable about it, they are bullied and coaxed by their brothers to give up in their interest. The enactments have remained unfulfilled. thanks to a weak enforcement machinery. Neither the police nor judiciary have been able to provide a dynamic or impact making leadership in this fight for the protection of women.

Enforce their rights

Which leaves us with only one hope-the ray of change has to emerge from within us. It is the society-the men and women—who will have to gear up to fight social taboos and conditioned beliefs against women. The winds of charge are beginning to blow. Woman has taken the first step forward she has started questioning the mental torture, low status, the denying of education and the opportunities to her. She wants to live and live respectfully. This is the begining of the fight against exploitation. On its part the Government which has drafted the legislations for protection of women, initiated welfare measures for their wellbeing and has, in fact, created a special Department of Women and Child Development, should ensure that the woman coming forward to protest gets full justice through its enforcement agencies. ☐☐☐

(Courtesy : Spotlight, AIR)

Their struggle for equality has begun !

Kamla Mankekar

The Indian women, according to the author, have begun their journey towards attaining equality and progress despite the fact that majority of them, living in rural areas, still adhere to their traditional role as wife, mother and housekeeper. They have realised the need to get equality and enhance their social and economic status. Therefore, the change must come, maybe slowly, but surely, feels the author.

THE TOPIC IS WOMEN AT THE CROSSROADS. Personally, I wonder, if Indian women have traversed long enough on their journey towards equality and progress to reach the crossroads. To my mind, women have just begun this journey and it will take them quite a while to reach the point where they might need to pause and decide which direction to take.

Not urban elites alone

When we talk about women in India, we cannot refer to a handful of urban elite only; we, then, must consider the great mass of Indian women living in small towns and rural areas. These, the latter section, have yet to establish their identity as individuals; they are not yet in a postition to think for themselves, to chalk out their own furture. Social constraints, religious interpretations of their role in life. and, above all, women's own reluctance to change their image and role are among the most serious obstacles in the path which could ultimately lead them to self-reliance, progress and equality. Are women working towards these goals or are they even ready to work towards these goals ?

To answer these vital questions, one has to analyse the present situation. What is the status of women in society today ? What are the factors which are hindering their progress ? What are the solution to these problems ?

Self-deception

Indian society, particularly women themselves, have been indulging in self-deception. We constantly talk of equal rights and opportunities guaranteed to women by the country's Constitution; we never tire of referring to a glorious past when women achieved excellence in every area of activity; of traditions which put women at par with divinity, glorified motherhood and ordained their worship to ensure the well-being of society.

The realities of today, as we all know, are totally different. Besides growing trend of violence and crime against women, they are discriminated against at practically every stage of life. Are women working for reversal of these trends ? Or, are they,. indirectly, perpetuating discrimination against their own sex ?

Oh, birth of female !

Let us start with the girl child. Her very birth is an unwelcome event in most families. Female infanticide has given place to foeticide. Amniocentices is the new weapon. Pregnant women undergo tests to determine the sex of the foetus and seek abortion if it happens to be female. Women—whether mothers or grandmothers—wish to have only male children !

A girl child fails to get either adequate nourishment or medical care. The number of malnourished female children is at least 50 per cent more than that of male children. Consequently, they are more prone to childhood ailments than boys. However, statistics indicate that more male children are brought to clinics and hospitals for medical attention than girls who are

brought for treatment only when the ailment is pretty serious. Girls are discriminated against in matter of food too; they are breast fed for shorter periods and weaned earlier than boys. While even among poorer families, special weaning diets like wheat, gram, suji, khichdi etc. is given to boys, girls introduction to cereals is by a piece of 'roti' only.

Rampant illiteracy

75 per cent of our women are still illiterate. Schools are now available for a vast majority of children, and official figures say that almost 85 per cent of the children of school going age are enrolled in primary schools. The figures for girl, enrolment are around 65 per cent only. That by itself is not a very serious drawback. The matter of concern is that 42 per cent of the girls enrolled drop out of schools between class I and II and by class V. the drop-out rate is almost 60 per cent. They are then busy with taking care of younger siblings and assisting mothers in household chores. As class V is the minumum schooling period for attaining permanent literacy level, the dropouts of younger generation are adding to the illiterate mass of women. Parents are not concerned over the situation. A survey carried out by the Committee on Status of Women indicated that while 17 per cent of parents did not consider schooling essential for their daughters, 77 per cent felt primary edcuation was adequate for girls.

Literacy is directly linked with development and economic productivity of women and is necessary even in modern agricultural operation. One of the major schemes launched in recent years is Integrated Rural Development Programme. This is to train young people in villages in various skills. Thirty percent of seats in this programme have been earmarked for women. However none of the States has been able to attain this target as literate rural women are just not available.

Agricultural mainstay

It is a well-recognised fact that more than 60 per cent of agricultural operations have been traditionally handled by women; now mechanisation is pushing women out of these jobs. It was suggested by planners that wherever mechanisation is introduced, women must be trained to use, service and maintain the machines. That is not being done, men do not want their womenfolk to handle machines; not that they are not capable of doing so. In hill areas where men migrate to cities for work, women take care of total agricultural operations including crop planning and marketing of produce. In other areas, men are reluctant to share control with women.

Who takes decision

Urban women have different type of problems. It is contended that education and economic productivity would automatically enchance the status of women and invest them with decision-making authority in a family. In reality this has not happened. Education and training has equipped women to be economically productive, but that skill has not brought economic independence to them. They rarely have control over their earnings and assets. A working wife is expected to discharge all her household duties, do a full time paid job and yet hand over her entire income to the husband or parents-in-law who decide how and where to spend it.

It was hoped that a working girl's parents would not have to meet dowry demands. That is not so. Capacity to earn is only an added qualification and the bride is still expected to bring dowry.

Have they equal rights

It is true that legally and constitutionally Indian women have been given equal rights with men. But few are aware of these rights; fewer still are in a position to exercise them. Though they are entitled to inherit property, if there is a dispute rarely a sister would fight for her right with her parental family or brothers, firstly, because she is not educated enough to independently launch such proceedings and, secondly, because she looks up to her parental family for emotional security and assistance in time of need; in her insecure state, she would rather forego monetary gain than offend her brothers.

Societal attitude

The bane of a women's problems today is society's refusal to change its attitudes toward her. While some women have gone ahead, educating and training themselves in numerous skills and have proved their merit in various fields, men are not willing yet to accept them as equal colleagues. They consider the emerging new woman, confident, capable and self-reliant as serious threat to male supremacy. Hence their resentment to women's assertion of equality; perhaps this resentment too is the reason behind the growing violence against women; may be demand for dowry, for control over a woman's earnings and assets, and insistance that she alone must carry the burden of household duties is a way of asserting the male power, of emphasising man's dominance in family.

But then is it men alone who perpetuate discrimination against women ? Perhaps women themselves are the worst culprits in this respect. It is the mother who discriminates against her daughters in preference to sons in every respect; it is she who neglects her nutrition, health and education. It is the mother-in-law who often proves a tyrant rather than the husband. It is women who are willing, may even anxious, to abort female foetus and nurture only male offsprings.

And their own perception

When Hindu Code Bill was being propagated and constitutional reforms to ensure equality of sexes were mooted, a group of women leaders went to Gandhiji to seek his blessing and support for the cause. Bapu pondered over what they had to say and then replied, "by all means reform the laws if you so desire. But

remember, ultimately it is the change in social attitudes and women's own perception of their role, that would enhance their status" That was, and still remains the truth.

And who is better suited to bring about the necessary change in social attitudes then women themselves ? As mothers, wives and community leaders, they alone can usher in an era of equality and progress of women.

Awareness is there

The picture is perhaps not as bleak as it might look. If women are not yet at the crossroads, they are heading towards that point. The need to attain equality, and enhance their social and economic status has been created. Women today want to be contributors to community and national progress. When will they be equipped to do so effectively, is however not easy to guess.

Women in India, more than anywhere else perhaps, have been the backbone of society, its conscience keepers, so to say. They have kept moral and cultural values alive. They have a strong sense of family responsibility and have avoided strife even at the cost of their own welfare. But the awareness of the need for change is dawning upon them. The change, therefore, must come, may be slowly, but surely.

(Courtsy· National Programme· All India Radio)

(Contd from page 17)

TABLE -3

Percentage contribution of male and female workers in various economic activities for the year 1986 in Narayanpatna block

Sl No	*Type of work*	*Contribution of male workers.*	*Contribution of female workers*
1	Cultivators	62.50	37.50
2.	Agricultural labourers	55.56	44.44
3.	Crop production	60.80	39.20
4	Household industries	90.67	9.33
5.	Construction	77.33	22.67
6.	Forest collection	55.56	44.44
7.	Quarrying	56.45	43.55
8	Business	80.00	20.00
9.	Services	100.00	—
10.	Household work in others' house		100.00

Source-Sample Survey-1986.

(Contd from page 12)

the very thinking in the society. They should stop devaluating women's work and stop treating them as property or objects of lust.

The most active role has to be played by women themselves. They have to come out of their inertia and equip themselves for rational thinking and assertive behaviour for right cause of women masses in general.

(Courtesy . National Programme: All India Radio.)

States accept 166 m-tonnes foodgrains target

States have accepted the national target of 166 million tonnes of foodgrains production this year.

The National Conference on Agriculture on Kharif Campaign which concluded in early April in New Delhi endorsed the Kharif target of 92 million tonnes. The Rabi target is 74 million tonnes for 1988-89.

The Agriculture Production Commissioners, Agricultural Secretaries of States and senior officials from the Union Agriculture Ministry who attended the Conference agreed that optimum use of various inputs would be the key to raising agricultural production.

It was emphasised that the concessions announced in this year's budget should be passed on the farmers by effective input delivery mechanism. In this respect, timely availability at reasonable rates of quality seed, fertilizers and plant protection material assumed special significance.

It was decided that for 1988-89 Crop Plan the import of plant protection chemicals should be centralised and handled by a Central organisation having the necessary experience and capability.

Separate discussions were held with the 14 States covered by the Special Foodgrains production Programme and the strategy was finalised to increase production and productivity of rice, mazie, sugarcane, bajra and pulses. The States were advised to evolve an effective monitoring system at district and State levels to remove constraints and ensure timely and adequate availability of farm inputs.

The Meeting reviewed the performance of foodgrain production in 1987-88. It was expected that the Rabi 1987-88 production would equal the best production achieved so far. Rabi oilseed production was also expected to touch a new record. While foodgrains production in 1987-88. It was expected that the Rabi 1987-88 production would equal the best production achieved so far. Rabi oilseed production was also expected to touch a new record. While foodgrains production figures were still to be compiled, the States were of the view that foodgrains production should not fall below 135 million tonnes. ☐

Improving the lot of rural women

Ajit Kumar Sinha

In this paper the author attempts to test the hypothesis that our theoretical commitments, policies and programmes have not created any significant impact in the rural areas where 77 percent of the country's female population lives. In support the author adduces data collected from the field survey of rural industrial households of Bihar, the most backward state of India, having perhaps the lowest per capita income in the world. He also touches upon the socio-economic programmes for development of rural women in the VII Five Year Plan and suggests the setting up of a separate "Rural Women Development Corporation" for the well-being of the rural women.

INFERIORITY OF WOMEN'S STATUS and position is one of the basic characteristics of the under-developed economies. Development, i.e., economic metamorphosis, is unimaginable without improving the women's status and position in the under-developed economies. Therefore, India is committed to steady improvement in th status of women to bring them into the mainstream of national development. Under the different Five Year Plans, general as well as special programmes having been undertaken to cater to the special requirements of women.

The study is based on the hypothesis that our theoretical commitments, policies and programmes have not created any significant impact in rural areas where 77 percent of the country's female population lives. An attempt has been made in the first section of the paper to test the hypothesis on the basis of data collected from the field survey of rural industrial households of Bihar, the most backward state of India, having lowest per capita income in the world (except Ethiopia). The second section discusses the socio-economic programmes for development of rural women in the Seventh Five Year Plan and a few suggestions have been put forward in the third section of the paper.

It has been claimed in the official documents that the most important means of achieving the goal of steady improvement in the position of women is to secure for them a fair share of employment opportunities. Rural industries sector has been providing an avenue for women employment in the rural areas, since long. Therefore, the field survey of 113 rural industrial households, selected on the basis of stratified sampling method from 50 villages of Bihar, has been conducted to ascertain the status and position of women.

Sex and age composition

Samples show (Table-1) that out of 113 households, the total sample population is 841 in which 437 i.e. 52 percent, are male and 404 i.e. 48 percent, are female. The sex ratio reflects a relatively excessive masculinity of its population. This is mainly attributable to the preferential treatment given to the male and neglect of female specially during reproductive span.

The age composition of sample population further confirms it. Out of the sample population, 352 i.e. 41.8 percent are in age group of below 15 year, 393 i.e. 46.7 percent are in age group of 15-50 and 96 i.e.11.4 per cent are in age group of above 50 years. Out of the 352 persons of below 15 years age group 175 i,e, 49.3 percent are male and 177 i.e. 50.7 percent are female. Out of the 393 persons of 15-50 age group 213 i.e. 54.2 percent are male and only 180 i.e. 45.8 percent are female. This is the reproductive span of female poulation. Out of the 96 persons of above 50 years age group 49 i.e. 51 percent are male and 47 i.e. 49 percent are famale.

Educational level

So far the educational level of households is concerned, out of the sample population, 550 i.e. 65.4 percent are illiterate in which 371 i.e. 44.1 percent are

of above 6 years of age group and 179 i.e. 21.3 percent are of below 6 years of age group. Out of 550 illiterates, female are 309 i.e. 76.5 percent of the female population in which 215. i.e. 53.2 percent are of above 6 years and 94 i.e. 23.2 percent are children, below 6 years of age group. While out of 550 illiterates male are 241 i.e. only 55.1 percent of the male population in which 156 i.e. 35.7 percent are of above 6 years and 85 i.e. 19.4 percent are children below 6 years of age group. The illiteracy is much more in women population than male population.

Out of the sample population, 236 i.e. 28 percent are literate having qualification below matriculation in which 151 are male i.e. 34.5 percent of the male population and 85 are female i.e. only 21 percent of the female population.

Out of the sample population, 33 i.e. 3.9 percent of the total population are matriculate, in which 23 are male i.e. 5.2 percent of the male population while only 10 are female i.e. only 2.4 percent of the female population.

Out of the sample population, 17 have Intermediate level education and 5 have qualification of Graduation or above. But all of them are male. Thus 2.6 percent of the total population have qualification above matriculation in which female population have no share. Whereas 5 percent of the male population have qualification above matriculation.

In brief 76.5 percent of female population is illiterate, 21 percent is literate, having qualification below matriculation and 2.4 percent is matriculate, whereas the proportion of male population is 55.1 percent, 34.5 percent and 5.2 percent respectively. 5 percent of male population have qualification above matriculation. but no female have qualification above matriculation. Education is an effective means to improve the status and on this front, women population is far behind.

Table-1

Composition of sex, age and education level of rural industrial households

1 Number of households surveyed	113
2 Number of family members:	
Male —	437
Female —	404
Total	841
3 Age structure.	
(i) 0-15	
Male	175
Female	177
Total	393
(ii) 15-50.	
Male	213
Female	180
Total	352
(iii) 50 and above	
Male	49
Female	47
Total	96
Grand total (i)+(ii)+(iii)—	841
4 Educational level·	
i) Illiterate·	
Male	241
Female	309
Total	371
(A) Ittiterate (above 6 years)	
Male	156
Female	215
Total	371
(B) Illiterate (below 6 years)	
Male	85
Female	94
Total	179
(ii) Below Matriculation.	
Male	151
Female	85
Total	236
(iii) Matriculation:	
Male	23
Female	10
Total	33
(iv) Intermediate:	
Male	17
Female	0
Total	17
(v) Graduation and above.	
Male	5
Female	0
Total	5

urce: The table is based on the data collected by the author from field vey.

Activity structure

37.9 percent of the sample population i.e. 319 are working members and 62.1 percent i.e. 522 are non-working members. Out of 319 working members 223 are male i.e. 51 percent of the male population whereas 96 are female i.e. 23.7 percent of the female population (Table-2).

Out of 223 working male households, 46.2 percent i.e. 103 are skilled, whereas out of 96 working female households only 10.4 percent i.e only 10 are skilled. Thus 89.5 percent of female working members are unskilled labour.

Out of 522 non-working household members 248 are children below 15 years of age in which male are 119, 27.2 percent of the male population and female 129, 31.9 percent of the female population; 129 are students in which 81 are male i.e. 18.5 percent of the male population and 48 are female i.e. 11.8 percent of the female population; 115 domestic workers (i.e. housewives), all females comprising 28.4 percent of the female population and 30 are retired and disabled persons in which 14 are male i.e. 3.1 percent of the male population and 16 are female i.e. 3.9 percent of the female population.

Thus, out of non-working female households, 31.9 percent are children, 28.4 percent are housewives and 3.9 per cent are retired and disabled and only 11.8

percent are students whereas the proportions are 27.2 percent 0.0. percent, 3.1 percent and 28.5 percent respectively among male non-working households. This shows that not only the present, but future outlook is also gloomy.

In brief, sombre picture emerges out of the field survey results. The study confirms that development efforts undertaken so far have very little impact on the rural women and they are far away from the mainstream of development process, though we are moving towards the completion of the Seventh Five Year Plan. As a matter of fact, most of the rural women remain a domestic creature and stand uneducated, unskilled and neglected.

Table-2

Activity sturcture of rural indu-trial households

1. Number of households surveyed —	113
2. Number of family members:	
Male	437
Female	437
Total	841
3. Activity structure of family members:	
(i) Working:	
Male	223
Female	96
Total	522
Total	319
(ii) Non-working:	
Male	214
Female	308
Total	113
Total	319
(ii) Non-working:	
Male	214
Female	308
Total	522
4. Skilled family members:	
Male	103
Female	10
Total	113
5. Activity structure of non-working family members:	
(i) Child (below 15 years excluding students):	
Male	119
Female	129
Total	248
(ii) Students:	
Male	81
Female	48
Total	129
(iii) Domestic workers:	
Male	0
Female	115
Total	115
(iv) others (retired and disabled):	
Male	14
Female	16
Others	30

Source: The table is based on the data collected by the author from field survey.

Programmes in Seventh Plan

In Seventh Five Year Plan, an integrated muliti discipliinary approach has been adopted covering employment, education, health, nutrition, application of science and technology and other related aspects in areas of interest of women. Efforts would be made to extend facilities for income generating activities and to enable women to participate actively in socio-economic development. The educational programmes would be restructured and school curricula would be modified to eliminate gender bias. Enrolment of girls in elementary (in order to reach 100 percent coverage), higher secondary and higher education formal as well as non-formal, will be given high priority.

In the field of science and technology, stress would be laid on evolving devices to reduce the drudgery of women so that the time saved is utilised for development activities. Training and retraining would be ensured for many 'S' and 'T' related programmes. The beneficiary oriented programmes in the various sectors of development would be suitably modified or reoriented, so that the due share of benefits from such programmes is availed of by them.

The major task of the Seventh Plan is to treat women as specific target group in all rural development programmes. Special attention would be given to improving existing skills of women and imparting to them new skills through upgradation of training and demonstration for gainful employment/self/employment to women in rural areas. Households headed by women would account for at least 20 percent of the coverage under IRDP Programme. Stress would be laid on giving adequate employment to women beneficiaries under NREP and RLEGP schemes. About one-third of the beneficiareis under TRYSEM programmes are expected to be women. The scheme of finanical assistance to the assignees of ceiling surplus land to buy inputs etc. would be oriented to confer benefits on a larger number of households headed by women. The scheme of training of rural women in public cooperation would be extended to develop leadership qualities among them and to involve them in the developmental activities of the country.

A new scheme, namely, Women's Development Corporation would be taken up for promoting employment generating activities by supporting schemes for women groups and women from poorer sections of society. These corporations would identify potential areas of employment and assist beneficiaries in project formulation, raising the requisite finances and marketing of their products. A Women Development Planning and Monitoring Cell will be set up for collection of data and monitoring of plan programmes.

Thus, several potential programmes have been formulated in the Seventh Five Year Plan for the development of rural women. But at the time of launching Second Five Year Plan, Prof. Mahalanobis had openly expressed his apprehensions that implementation may become difficult in the existing system of administration. But even after over three and half decades, our Plans are at the mercy of the same bureaucracy for implementation. As a consequence, we

are successfully implementing our programmes only on papers. If we allow the present state of affairs to continue, the future of programmes of rural women development will be the same which we are witnessing since the beginning of the Plan era. Naturally the process of planning needs a new orientation.

Suggestions

In view of somber picture emerged out of the field survey, a number of issues need to be settled to achieve success out of various potential programmes of the Seventh Five Year Plan for the development of the rural women folk:

1. A direct Plan formulation and implementation machinery should be developed under the Planning Commission. In this connection Block Planning Board/Commission should be set up which should be coordinated under District Planning Board/Commission. The District Planning Board should be coordinated under the State Planning Board/Commission and the State Planning Boards/Commissions should be coordinated under the Planning Commission. The Planning bodies should not sit upon as a mere expecter in the matter of Plan implementation, rather they should have power to act effectively in the process of Plan implementation.

2. A separate 'Rural Women Development Corporation' should be set up for the well-being of the rural women in general and particularly for promoting employment generating activities, education and skill among them with the coordination of proposed Plan bodies. Various incentives should be provided by the Corporation to rural women to motivate them to develop their personality with zeal and enthusiasm.

3. Government efforts, through the direct channel alone, for the development of rural women would not be adequate. Mass awakening for this purpose is inevitable, so planned programmes should be implemented as a movement, rather than a mere routine and stereo-type working over administrative tables. ☐☐☐

(Courtesy Kurukshetra)

Cost escalation of projects

152 projects were delayed with respect to original schedule of commissioning as on 30th June, 1987. The number of projects reported delayed as on 31st December, 1987 was 169. The data on projects for Quarter ending March '88 has still not been received.

The cost over-run of the delayed projects as on 30th June, 1987 and 31st December, 1987 was about Rs. 18,900 crore and Rs. 21,000 crore respectively with respect to original sanctioned cost. ☐

Import of technology and capital goods liberalised

The Government has decided to further liberalise the Technical Development Fund Scheme with a view to making it more flexible and result-oriented. The Scheme will now be available for the import of Capital equipment (all types), Technical know-how, technical assistance, technical drawings and desings technical consultancy services, by existing industrial units for their modernisation and upgradation of technology.

In order to avail of the facility under this scheme, it must be shown that the proposed modernisation and upgradation of technology would contribute significantly to any of the results such as quality improvement, cost reduction, productivity gains, more efficient utilisation or conversion of raw-materials/inputs, energy saving, enhancement of export potential or product diversification/product-mix rationalisation.

The ceiling for imports under this scheme will henceforth be the foreign exchange equivalent of Rs. 2 crore per unit per financial year. In deserving cases, this limit can be relaxed to enable a total technology package to be implemented. ☐

Production of steel goes up

Over 13 million tonnes of finished steel was produced during 1987-88 for distribution in the country. This was 1.2 million tonnes more than the estimated availability during the previous year. According to the annual report of the Department of Steel, the output of pig iron during the year was 1.45 million tonnes as against 1.39 million tonnes during 1986-87 Cannalized imports of steel during April-December, 1987 was 6.54 lakh tonnes and that of pig iron 6.9 thousand tonnes.

The report says the production of saleable steel in the five integrated steel plants of Steel Authority of India Ltd (SAIL) was 4.63 million tonnes during the period April, 1987 to December, 1987 as compared to 4.31 million tonnes during the corresponding period of the year 1986-87 thereby indicating a growth rate of about 8 per cent. SAIL has planned to produce 7.24 million tonnes of saleable steel during 1987-88 as against about 6.31 million tonnes produced in 1986-87. In addition to this, TISCO is expected to produce about 1.93 million tonnes saleable steel and another 3 million tonnes is expected to be produced by electric arc furnaces in the secondary sector. ☐

The gender gap in world economy

Pramod S. Bhatnagar

Women have a key role to play in managing the world economy. But, according to the author, today women's work in the family, farm or business is not recognised as productive activities. He,therefore,feels that women have a long way to go in becoming equal partners with men in the development process

SINCE THE FIRST NOBEL PRIZES were awarded in 1901, women have received eight per cent of the prizes in peace, seven per cent in literature, three per cent in chemistry, ten per cent in physics but none in economics. Despite the key role that this half of humanity play in managing world economy through every household, neither honours nor titles have gone to them. Throughout the universe women continue as the poor, the illiterate, the unemployed and the under-employed.

Key role of women

In economic value, household labour of women will add a one-third, or $ 4,000,000,000,000 to the World's annual economic product. Rural women account for more than half the food produced in the Third World In Africa, it is as much as 80 per cent of the food production. Despite the key role women play, they have been largely by-passed in development strategies. In developing countries, two-thirds of them over 25 have never been to school. Nutritional anaemia afflicts half of all women of child-bearing ages and their average life span is 15 years shorter than babies born in developed countries. Although comprising 50 per cent of the World's enfranchised population, they hold no more than ten per cent of the seats in national legislatures. One government in three has no women representative in the highest decision-making body of the country

Although there is great diversity among two-and-a-half billion women speaking 2967 languages living in countries with wide disparity in average annual income, women all over the world share a fate of inequality of opportunity, the injustice of the traditionally imposed second place in the family, social, economic and political setting The post-war period has witnessed unprecedented economic and technological growth From 1980 to 1985 the world's output tripled in real terms and per capita income on average doubled There has been a rapid expansion of trade, production and capital flows for a large number of population of working age. From 1950-1980 the paid labour force grew by an estimated 700 million people. Still, at poverty levels, women have been a growing majority

Women's unemployment

Though they have continued to enter the labour force in large numbers, women's unemployment rate during 1980 to 1985 rose faster than men's.Much of their work till today has remained unpaid. Then household responsibilities, bearing and caring for children, cleaning, washing, guarding the family's

ealth, growing and processing food are not counted as roductive activities. Women's work in the family,farm r business is also not recorded in employment or icome accounting.

Entry into paid employment has no doubt brought illions of women in the mainstream of economic ctivity. It has destroyed the isolation which has so far een damaging women's status. However, whether it ill bring the equality of economic opportunity for omen will depend upon a complex of factors. So far the itegration has been a slow process.

Representation in economy

Different regions of the world reveal a diverse picture the change and dimensions of women's economic le. In Eastern Europe and the USSR, women presentation in paid employment is 90 per cent of en's In the middle East, the ratio of women to men in e labour force is only 29 per cent. In Northern Africa d Latin America, cultural values have affected the omen's access to gainful employment.

Women's economic progress is more complex than eir increasing numbers entering the labour market. ven their large influx into the labour force has not preciably changed the nature of work for vast majority reconciled their productive and reproductive role. A rge portion of women's labour force is unemployed d underemployed.

Disparity in employment

Evidence of the male-female disparity in unemployent comes from both industrial market of economies d the Third World. In most countries since 1970, ficial records show women's unemployment rates gnificantly above men's.Even in an advanced country e Sweden Women's unemployment rates are 13 per nt higher than men's It is much higher in France, Italy d Japan.

Gap of income

There is also substantial gap of income between men d women. Although these gaps have been reduced, in country do women appear to have reached the rity with men in wages and salaries. The highest erage is in Sweden where women's earnings are 90 r cent of men's. In Japan, it is 43 per cent. This is sides indirect discrimination implicit in recruitment ecedures, training and promotion policies which vour men.

The increased employment of women has had little pact in reducing the occupational segregation which at the base of inequality of pay between the sexes. omen are concentrated in a narrow range of field nsidered to be of lower responsibility and skill, and erefore are paid less. Relatively few reach supervisory d management positions.

unskilled work

Job segregation occurs in both developing and developed countries. Agriculture represents the principal employer of female labour. Industry and the services account for roughly equal share of women's labour force. In all these fields their names are clustered in unskilled, dead-end job with low and little prospects for advancement. In agriculture, women do planting, weeding and harvesting while men operate mechanical equipment. In the services women are largely in menial job and in industry they provide cheap assemply-line labour.

In developed countries also women's occupational concentration is associated with unfavourable work pattern: lower wages, few fringe benefits and less security.

Low pay and unskilled work leads to improverishment among women. Throughout the world there are more women than men who are poor and their numbers are growing In the USA, one of the most prosperous countries in the world, two out of three adults living below poverty line are women. In 1985, one elderly women in six was poor, one in every two poor families was headed by a women.

While the feminisation of poverty is increasing in both rich and poor countries, the case of rural women in the Third World is special and 18-hour working day is not uncommon for them. Overworked, undertrained, undernourished and illiterate, they have limited chance to enter the cash economy, although they produce more than half the food in the Third World and 80 per cent of the family food supply of rural Africa.

No independent status

Several factors like the growing numbers of women-headed housoholds are also making the women poorer. The trend has been intensified in rural regions by the out-migration of men into urban centres in search of work. Left behind with the burden of providing for the family are women, handicapped by lack of resources as well as by laws and social institutions which give them no independent status. They have no rights to own, lease, buy or sell the small piece of land, they cultivate for the family food.

In general, commercialization of agriculture has increased women's work load and reduced the opportunities for independent cash income. As the higher production of crops for sale inoreased land under cultivation, women's work in the field also increased. Men however controlled the marketing of cash crops. Women continued to have responsibility for child care and other economically invisible functions.

Government role

The International Decade for Women (1976-85) helped to stimulate the official awareness of the increasing impoverishment in the Third World and the central role they have played in these countries. Agreater focus on

(Contd on page 34)

Why this growing atrocities on women ?

N.D. Batra

The author here points out that many factors combined led to the present day inferior status of women in our society. In the face of prevailing situation, a mother is compelled to think the birth of a daughter as 'inauspicious'. To prevent the crimes against women, the author feels, awareness among women about their rights should be created, a common civil code evolved to give them a better deal and active support of voluntary organisations enlisted.

IN THE SECOND HALF of the last century, 1851 to be precise, a women delegate to the Women's Rights Convention at Ohio (USA) opined: "That man there says women need to be helped into carriages, lifted over ditches and to have the best place everywhere. Far from it ! Nobody ever helps me into carriages, over mud puddles or gives me the best place...aren't I a woman ? I could work as much as a man, eat as much when I could get it and bear the lash as well !" What she had said still holds good even today.

Then there are a few other quotes on her predicament as well. "Go back to your proper place in the kitchen and reproduce in the interest of the Aryan race," said Adolf Hitler. And Manu says: "She should do nothing independently even in her own house. In childhood subject to her father, in youth to her husband and when husband pre-deceases her, to her sons. She should never enjoy independence"

Significantly, if we delve deep into our recorded history, we will discover that new scientific or sociological invention has actually sent woman reeling back into a position of non-recognition, dwrafing her a person incapable of contributing much to society. For once, the first vital discovery of fire by man proved to be a major setback to her status. Having found fire of incalculable value, early man and woman agreed that one of them would have to stay in the cave to tend it. Since woman also suckled the babies, she agreed willingly to stay at home, foregoing her right to the outside world, where she had earlier hunted and fought with man. As a result, lack of exposure to the hazards of the jungle-life made her weaker and she in turn had to seek and accept the protection of man.

Patriarchal system

Hard on its heels followed the second setback to her status. This was by way of the family system. Man now began to bury his dead and the emergence of ancestor worship sowed the seeds of the patriarchal system. In this way, women themselves once again contributed to their loss of status by their discovery of farming and animal husbandry. For it was they who sowed grain and seeds in the clearings near their caves to watch the miracle of germination. With woman's help, man began to shape the land and to take animals for his sustenance. And when farming became his main occupation, he suddenly realised that the more sons he had, the more

secure he could become through their work in the fields. Thus woman preferred to be productive only by becoming mothers and having more children.

Origin of rape

Further, the dignity of woman suffered the third setback when homo sapiens made a departure from the animal behaviour. It was warped by the changing sexuality of man, whose lust grew with his leisure. He was now a farmer, had cattle, enough food, a comfortable life and was, above all, secure enough to devote to sexual pleasures. As this sexuality increased, he did away with a biologically determined mating season and evinced sexual interest in a female any time he chose. This was the historical origin of rape which man saw as the symbol of his ultimate victory over woman.

Pre-determined role

Since rape was the worst that could happen to a woman there was near-frenzied anxiety to protect her chastity to marry her off before she menstruated. But in doing so she was effectively deprived of education and exposure to culture, besides early marriage with all its attending consequences. Society has a pre-determined role for a girl— she is a good mother and a good wife. Her primary role lies in child bearing and child rearing-a task that may start immediately while the mother is still a girl. She is placed under severe restrictions and has little or no say in decision-making and is usually subordinate to her mother-in-law. Her virtues lie only in the services she can render as daughter-inlaw, wife and mother.

Unaware, or unmindful of the need for special or additional nutrition during pregnancy or lactation, the woman often suffers from the effects of nutritional deficiencies such as anaemia-which also affect the health of the unborn child-and leave her further weakened and vulnerable to diseases. An average Indian woman, for example, is said to spend approximately 16 years of her life in child bearing-and of the many pregnancies and births during these reproductive years, only some of her children will survive. And the woman herself may be old and wasted before she is 30.

Persisting imbalance

Then there is also a persisting imbalance in the provision and access to special medical services for women, such as maternity, antenatal and post-natal services. The number of hospital wards and beds reserved for women is far fewer than for men. It is reported that for every three men who avail of health services, only one woman does so. Yet, the percentage of sick women appears to be higher at any given time. Moreover, clinics are often not open at times convenient to a woman, and generally a woman does not seek treatment unless severely ill. As a consequence, the life expectancy of females in India is less than males (Males: 52.6 years and females: 51.6 years). That the number of males exceeds the number of females in India, could be gauged from the fact that in 1901 the sex-ratio was 972; it declined to 946 in 1951 and 930 in 1971. There was a marginal increase in 1981 with the ratio at 933. Although one could surmise that maternal and child-care programmes may have started bearing fruit, the general hypothesis for the steady decline is that the neglect of woman is a persistent phenomenon. This has turned into a more subtle form of deliberate neglect or indifference, as every female sibling would testify.

Inferior status

Of India's 788 million people, as many as 48 per cent are women. Yet she has been conditioned to playing an inferior and subordinate role-first to her husband. Attitudes rooted in cultural pattern and social needs of the past have made her subjugate her own needs, desires and ambitions, to those of others. The result is that she is considered to be an economic burden on the family; not much is invested in her and she is considered virtually worthless without a dowry; so she learns not to invest in herself. She is taught to believe that the birth of a son is desirable-not only as the first child but preferably all her children. Her own status in the family circle is exalted if she bears her husband a son. Not only that, she too is convinced that the birth of a daughter is inauspicious—after all, it does bring her less happiness and the danger of another quick pregnancy in the hope of a son, the next time. The new mother again denies her daughter adequate nourishment and makes her fee unwanted. Society gives open sanction to these attitudes and the girl grows up accepting her inferior status. This is equally so in both rural and urban areas, backward as well as in the more educated affluent strata of society where the birth of a son is welcomed with much jubliliation whereas the birth of a daughter is greeted with open disappointment.

Under-representation

More importantly, even at the end of the 20th century, women are doing almost all the world's domestic work, are earning less than men for similar work, are growing about half the world's food and outnumber men in the world's illiterate population and all these discriminations are likely to continue. Significantly women are woefully under-represented in the decision-making bodies of their countries, be it in the universities, chambers of commerce or industry, or legislative bodies at any level—the village panchayat, the district council, State Assembly or national Parliament—because of discriminations against them and the nature and quantum of work given to them.

Weeding out evil

However, the increasing number of dowry deaths should make us feel ashamed of the blatant greed of our society. The alleged suicide of three young educated girls in Kanpur should serve as an eye-opener. Besides, there are numerous instances of humiliation and torture meted out to girls but not all find exposure in the media. Equality for both the sexes may be existing within our more enlightened sections but a large majority of women are still badly treated. The picture has of late

become macabre. Legislation only will not able to weed out the evil of dowry from our society. The need of the hour is to develop the right type of attitude in minds of boys and girls from the beginning. The education system should be restructured so that it is able to inculcate a sense of self-confidence in the minds of students and equip them with the capability and capacity to lead an independent life.

Suggestions

Aside, the following suggestions may also be of some use: zealous youth should form anti-dowry squads at ward, village, block and district levels. They should ensure performance of matrimonial ceremonies with out pomp and show in their respective areas and also oversee the functioning of the enforcement machinery so that erring officials may be brought to book. Such squads should be given all necessary assistance by the administration. Every Association should also form a committee of a few advocates to provide legal help to a victim or her next of kin. There should be appropriate amendments in legislation so as to prevent such males from getting married or re-married who might be found guilty by a competent court for demanding dowry or causing the death of their wives. Also, the literacy rate of girls should be accelerated so that they may face such eventualities valiantly and not commit suicide tamely. Last but not the least, every year the results of various boards and universities in the country demonstrate that more and more girls are outshining boys in studies. More and more women are becoming prominent in various fields which were so far considerd male preserve. Girls should be taught that marriage is not the only aim of life. They can play an equally useful role in society in various fields even if they are not able to be suitably married. This mode of thinking can go a long way in rooting out the evil of the dowry ststem from our society

Legal measures

The single law which could go a long way towards violence against women and their harrassment is the right to property. Generally women do not fight with their brothers for the property because they feel, and perhaps rightly so, that if their parents died, the brother would look after them and get them married; even dowry is given to daughters because many feel she does not get any part of the father's property. In this way, women's self-esteem is kept very low in her own family and she is always considered 'parayadhan' and not a part of the family. No wonder, then, a newly-wed bride considers suicide as a viable alternative and even her in-laws at times wish her dead, not excluding the cases of incest which remain unreported.

But atrocities on women is not an issue that concerns the family alone; it is relevant to society as a whole and as such we must equip ourselves to mobilise public opinion against it. As for the common civil code for the country, such a step would call for a change in the fundamental rights which took a long time to develop in view of a heterogeneous society like ours. Nor could economic prosperity alone solve the problems of women because educated persons had been found to be committing crimes like bride-burning. There is therefore an imperative need for new ethos for giving justice to women and awareness of their rights, apart from opening of women's cells in police departments and enlisting active involvement of women social workers. □□□

(Contd from page 31)

their economic needs was deemed necessary for the sake of development and equality.

Change is must

However, no significant change has occured in development programming in women's favour so far Executive Boards of the major International Aid Agencies still tend to be exclusively male. A lack of clear quantitative information in the area makes it difficult to judge the progress. The statistics available on allocation under international aid programme, are hardly encouraging At present, women are still a long way from being equal partners in development of planning and programme. □□□

Planning at district level

The Minister of State in the Ministry of Planning, Shri B.S. Engti, told the Lok Sabha recently that the States had been advised to prepare district Plans. To improve methodology, States were also advised to have some District Plans prepared on a pilot basis.

In a written reply, the Minister stated that the Planning Commission had engaged the services of the National Institute of Rural Development, Hyderabad, for the preparation of Model District Plans for one district each of the representative States of Tamil Nadu, Maharashtra, Bihar, Uttar Pradesh and Himachal Pradesh. □

Target of Indira Awas Yojana exceeded

Against the annual target of 1.33 lakh dwelling units, 1,75,169 dwelling units were provided by various States/Union Territories by the end of December 1987 under Indira Awas Yojana, a housing scheme aiming at providing shelter to the SC/ST families and freed bonded labour in the rural areas under RLEGP. During the third quarter of 1987-88, i.e. October to December 1987, 1, 24, 578 dwelling units were provided by various States/UT Administrations against the quarterly target of 0.36 lakh units which shows an achievement of 346.8 percent. During the third quarter, 10 States have exceeded their targets. However, the performance of the Scheme during the first 2 quarters was 63.3 per cent and 101.1 per cent respectively. □

Let them beware of their rights

Mohinder Kaur Dhingra

Women need to be given the status that they deserve. Emphasising this the author here says that though there is an awakening among women about their rights and status in society, a lot more remains to be done in this direction. The role of emancipated women has to be enlarged to enable them to play their due role in the economic development of the country. Besides more and more women have to be educated especially in the rural area to enable them to break free of the shackles and think freely in broader perspective, share and contribute in the stupendous task of nation-building, feels the author.

WOMEN IS THE BUILDER AND MOULDER of a nation's destiny. Though delicate and soft, she has a heart far stronger and bolder than man. She is the supreme inspiration for man's onward march—an embodiment of peace, love, piety and compassion. Ostensibly then the position occupied by women in a society determines the degree of development of that particular nation.

The needed due status

It is undeniable that the problem of removal of poverty and raising of the standard of living, so urgently needed, cannot be tackled affectively unless women do not participate fully. So far women in our country have been playing a secondary role in our society, of an insignificant being who is only confined to the household. They have not had any role in the decision-making of their own house; rather they always towed the line set by the male members of the society. The women in India have been so conditioned that they have happily been playing the role of a child bearer, of a mother, doing trivial chores of the household without concerning themselves beyond the surroundings of their house, their children and husband. But the last two decades have seen a considerable change in the condition and status of women, Due to socio-economic changes that have suddenly taken place, women have come to the forefront. They have started contributing their share to the development of the country. No country can progress properly when half of its population is ineffective and redundant. It has been proved and acclaimed that there is no difference between the intelligence of a man and woman-rather with the added qualities of dedication, hardwork, perseverance and honesty they are capable of producing much better results than men. Realizing the potential of women, which can be a great contribution towards the development of the nation, a 29-member National Committee on Women has been set up recently under the Chairmanship of the Prime Minister, to advise the government on measures to accelerate the involvement of women in the development process and to ensure them the status envisaged in the constitution through policy intervention and action programmes.

A lot to be done

Social attitudes have to be moulded according to social needs keeping up with the pace of social reconstruction, Women have played a vital role, though indirect, in the development of a country. In the past women were always led by the nose. Let alone a few exceptions, by and large the women in the past continued to be narrowminded and thus failed to bring up children of better quality. However, today the emancipated woman

is equally educated which in turn helps in the process of economic growth yet there is a lot to be done for them. Educated women alongwith men seek employment practically in all the spheres ascribed to men. Thus they equally contribute to Gross National Product of a country. Enlightened and educated women help to fight conservatism, blind faith in superstitions, etc. Consequently the task of family planning becomes easy, a factor so relevant to control overpopulation whith is otherwise a serious impediment in developmental process. Today the birth control measures are penetrating into larger and larger number of homes everyday. The development of a favourable attitude towards family planning is possible only with the help of women and once the attitude grows in society, it brings about a permanent fall in the birth rate. If a nation succeeds in developing a positive social attitude towards family planning it indirectly renders a great help in speeding up the process of growth.

Educating them, most vital

Ignorance is at the root of many evils which subject the humanity to suffering. The most gigantic task is of educating more and more women, specially in the rural areas, so that they break free of the shackles, confining them only to the husehold to free themselves from the bondage of dependence. So that they act and think freely in broader perspective, share and contribute in the stupendous task of the progress of the nation. Education of women folk can work as a two-edged weapon which can push women forward towards the betterment of the nation and society and at the same time it can help to eradicate social evils like dowry and sati system. Enforcement of law against such evils can achieve nothing unless the awakening comes in the women themselves against such practices which is possible only through education. Since these evils are associated with the women, they themselves have to raise a voice against them.

Need for new family norm

Today the conditions of life have changed. The emancipated woman is breaking the shackles that bound her in traditional slavery. She is yet to be economically independent, politically equal and socially free. She is no more to be confined to hearth and home. If the country is to progress she is no more to be an intellectual slave of man. The relationship of man and woman has to be redefined and readjusted. The new basis of relationship apart from economic and sex has to be discovered. Man has realised his complementariness in a woman and bases his relationship on equality and mutual respect. Today women should be granted more freedom, more facilities and more rights. Domestic life has its drudgery and its own taboos. This has created many sociological problems. To overcome this,a general public opinion has to be mobilised through various forums. It needs new family pattern to harmonise the claims of motherhood with the claims of freedom and a greater social mobility. It is only then that the future of a country can be sustained. □□□

(Courtesy: Spotlight, AIR)

Measures taken to optimise utilisation of water

Optimising the use of irrigation water and tim completion of projects have been the key thrust areas the development of water resources during 1987-8 Outlining the achievements and perspective in t sector the Annual Report of the Ministry of Wat Resources for the year states that the developmen efforts were focused on measures to maximise t utilisation of water.

The Report Says emphasis was laid on the creation addtional potential, close monitoring of projects und construction, the development of minor irrigati schemes and utilisation of potential through comma area development. The exploitation of ground wat achieved importance in the context of the prevail drought situation.

The Annual Report states that the National Wa Policy, a major landmark in the development of wat resources in India, was adopted during the year. The Wa Policy states that planning and development of wat resources would be governed by the national perspecti The river basin has been recognised as the basic unit planning for water resource development. The poli also calls for appropriate measures for optim utilisation and transfer of surface waters to water sh areas.

The past year witnessed the commissioning of Farak Navigation Lock to promote and encourage regul national traffic through this National Water way. T Lock was dedicated to the nation by the Prime Minist on November 16, 1987.

National Oilseeds Development Projec

Because of the shortage of edible oils, impo continued to be made for meeting the demand f domestic consumption. The annual imports during t period 1983-84 to 1985-86 were of the order of 11. to 16.34 lakh tonnes and worth Rs. 1,006 crore to R 1,319 crore. The annual indigenous production of edi oils during the corresponding period varied from 30 35 lakh tonnes. To attain self-reliance in edible oils a to redice imports totally by 1990, a special project h been formulated by Government of India. Under t project, oilseeds production is targeted to be increas from its present level of 12.4 million tonnes (average f 3 years) to 18 million tonnes of oilseeds by 1989-90 a 26 million tonnes by 2000 A.D. In terms of oil conte the targeted increase is from 3.6 million tonnes to million tonnes by 1989-90 and 8 million tonnes by 20 A.D.

Infrastructure as determinant of industrial growth

(An empirical study)

Nirmal Ganguly &
B.K. Sharma

Here the authors emphasize that overall industrial growth of the country is largely dependent on infrastructural development. This fact assumes even greater significance in the present context, given the growth-oriented industrial policy, huge stock of trained manpower and high rate of savings and capital formation. They have tried to show in an empirical manner the impact of growth of infrastructural sectors, viz., electricity, coal, steel, crude petroleum, petroleum products, cement, railway, etc. on the overall industrial growth. The authors feel that from the standpoint of economic policy-making, the present study will be of great practical relevance because for achieving a particular level of industrial growth, matching level of infrastructural capacity becomes an imperative necessity.

WITH THE START OF PROCESS OF PLANNED industrial development of the country, development of infrastructural sector for accelerated industrial development became an urgent necessity. The development of infrastructure was also required to industrialise the comparatively backward areas. This is so because at a particular stage of industrial growth, development of a theoretically optimum amount of infrastructural capacity assumes great significance. It is well known that development of infrastructural sectors like electricity, coal, steel, crude petroleum, petroleum refinery products, cement, railways, roads, ports and inland transport etc. are to precede growth of other economic activities and hence investment in infrastructure has to be made in anticipation of future demand rather than as a reaction to capacity deficiency. The basis for such a thesis is that once infrastructural capacity is created, this results in a number of external economies which reduce the cost of production. This provides a great fillip for utilising the unutilised and under-utilised resources which would have otherwise remained unutilised for want of infrastructural facilities.

Empirical testing of the hypothesis

In the present paper, we intend to examine in an emprical manner the impact of growth of infrastructural sectors on overall industrial growth both in terms of output and value added. In Section I, we have examined the relationship between output of infrastructural sectors and overall industrial output and in Section II, we have dealt with the gross value added by various infrastructural sectors and gross value added by the overall industrial sector. We present below the details of our study on the impact of infrastructural sector on overall industrial sector in terms of industrial output.

Section-I

Impact on output

In order to study the impact of infrastructure on the rate of industrial growth of industrial output, we have taken 15 years of data for growth in six selected infrastructure industries, viz. electricity, coal, saleable steel, crude petroleum, petroleum refinery products

and cement on the on hand (X) and growth in industrial production (Y) on the other.

We have also examined the impact of individual infrastructural sectors on industrial growth to capture separately their influence in shaping of our industrial growth. Thus, we have examined the following five relationships in terms of output.

(i) Impact of six selected infrastructure industries on overall industrial output;

(ii) Impact of growth in electricity generation on industrial output;

(iii) Impact of growth in cement production on industrial output;

(iv) Impact of growth in production of seleable steel on industrial output; and

(v) Impact of Railway Freight Movement on overall industrial output.

It is interesting to note that coefficients of correlation (r) in all the five cases, i.e. the relationship between combined infrastructure and industrial growth as well as the relationship of electricity, cement, saleable steel and railway freight movement, each of them considered separately with that of overall industrial output have been found to be highly significant. In three out of five cases, coefficients of correlation (r) are significant at 1 per cent level of significance. In remaining two cases, these are significant at 5 per cent level of significance. The results of our analysis are furnished below:

(a) Growth of six selected infrastructure industries and rate of growth of industrial output:

In this case, we considered the growth rate of six infrastructural industries, viz. electricity, coal, steel, crude petroleum, petroleum refinery products and cement, accounting for about 29 per cent of weight in the overall index of industrial production, and the rates of industrial growth for the last 15 years, i.e. from 1972 to 1986. We found out the coefficient of correlation (r) between these two variables and this worked out to be 0.81. This is highly significant at 1 per cent level of significance.

The regression equation arrived at by us is as follows:

$$Y = 0.59x + 1.35$$

The above equation suggests that in order to achieve the targeted rate of growth of 8 per cent in industrial output, the output of these six selected infrastructure industries should increase at the rate of 11.3 per cent annually.

(b) Growth rates of electricity generation and rate of growth of industrial output:

In this case also, we considered data for 15 years i.e. from 1971-72 to 1985-86 in respect of growth in electricity generation and rate of growth of overall industrial output.

On the basis of above data, we arrived at coefficient of correlation (r) or 0.85. This is highly significant at 1 per cent level of significance. The following is the regression equation obtained by us:

$$Y = 0.75x - 0.48$$

The above equation shows that in order to achieve the targeted rate of growth of 8 per cent per annum in industrial production, the generation of electricity has to grow at the rate of 11.3 per cent annually. This is all the more relevant in the present financial year i.e. 1987-88 when the country is faced with an unprecedented drought situation, the drought having affected most parts of the country. In such a situation when there is a possibility or diversion of power from industrial sector to agricultural sector to save the crop situation, all out effort needs to be made in accelerating the rate of growth of electricity generation.

(c) Production of saleable steel and growth of industrial production:

In this case, we have found out the coefficient of correlation (r) between growth in output of saleable steel and overall industrial output, taking 15 years data into consideration, i.e. 1971-72 to 1985-86. The coefficient of correlation (r) in this case works out to be 0 56 This is significant at 5 per cent level of significance. We have found the following regression equation:

$$Y = 0.18x + 4.61$$

This shows that in order to have an overall rate of growth of 8 per cent in industial production, production of saleable steel has to grow at the rate of 18.8 per cent per annum.

(d) Production of cement and growth of overall industrial output:

In this case, we arrived at a highly significant coefficient of correlation (r) of 0.73. This is significant at 1 per cent level of significance. The regression equation arrived at by us is as follows:

$$Y = 0.32x + 3.45$$

This shows that in order to have a 8 per cent annual growth in overall industrial output, cement production has to grow at the rate of 14.2 per cent per annum.

(e) Growth of overall railway freight movement (revenue earning) in terms of tonnes originating and rate of industrial growth:

In this case, we considered the growth rate for the last 15 years, i e 1971-72 to 1985-86 for freight movement in terms of tonnes originating and the rates of industrial growth. We have found out the coefficient of correlation (r) between these two variables and this worked out to be 0.57. This is significant at 5 per cent level of significance. The regression equation arrived at by us is as follows:

$$Y = 0.30x + 4.43$$

The above equation shows that in order to achieve the targeted growth rate of 8 per cent in industrial output, railway freight movement in terms of tonnes originating should increase at the rate of 11.9 per cent annually.

It is interesting to note that when we take the growth rates of these two variables from 1976-77 to 1985-86,

we found the coefficient of correlation (r) has improved further to 0.60. This shows that railway freight movement has started having greater bearing on the rate of industrial growth. This must have been made possible by other supporting factors like improved technology, increased availability of trained manpower, better policy environment and entrepreneurial initiative etc.

Section II

Value added by infrastructural sectors and their impact on value added by overall industrial sector:

In the preceding Section, viz. Section I, we have found out the relationship between infrastructural output and overall industrial output. In this Section, we have endeavoured to find out the relationship between value added by various infrastructural sectors and value added by the overall industrial sector. In this case, the results have been all the more encouraging, coefficient of correlation (r) in all the three cases we have studied being 0.95 and above. In all the three cases that we have examined in terms of value added, we have taken the figures for 15 years for gross value added (at 1970-71 prices) i.e. from 1970-71 to 1984-85. We have arrived at the figures of gross value added by the overall industrial sector by adding up the figures of value added by manufacturing sector, mining and quarrying sector and electricity sector. In this case, we have studied the relationship between value added by electricity sector and overall industrial sector; railways and overall industrial sector and fuel minerals and overall industrial sector. The figures of gross value added for fuel minerals is constituted by the value added by coal, lignite, petroleum and natural gas. The results of our study in terms of value added are summarised below:

(a) Value added by electricity sector and value added by overall industrial sector:

In this case, the coefficient of correlation (r) between these two variables worked out to be as high as 0.99. This is highly significant at 1 per cent level of significance.

The regression equation worked out by us is as follows:

$$Y = 8.92x + 26.42$$

The targeted rate of growth in gross value added in overall industrial sector for the Seventh Plan period being 6.9 per cent, value added by industrial sector has to rise from Rs. 114.45 billion in 1984-85 to Rs. 139.81 billion in 1987-88, Rs. 149.46 billion in 1988-89 and finally to Rs. 159.77 billion in 1989-90, the final year of the Seventh Plan. In order to attain this 6.9 per cent rise in gross value added per annum in overall industrial sector, value added by electricity sector has to rise from Rs. 10.06 billion in 1984-85 to Rs. 12.71 billion in 1987-88, Rs. 13.79 billion in 1988-89 and Rs. 14.95 billion in 1989-90. This shows that gross value added by electricity sector has to grow at the rate of 8.3 per cent annually so as to attain the targetted level of growth of 6.9 per cent in value added by overall industrial sector.

(b) Value added by fuel minerals and value added by overall industrial sector:

As mentioned earlier, the data for fuel minerals is composed of the figures of value added by coal, lignite, petroleum and natural gas. In this case, on the basis of 15 years of data of gross value added by fuel minerals and overall industrial sector, we arrived at coefficient of correlation (r) of 0.97. This is highly significant at 1 per cent level of significance. The following is the regression equation obtained by us:

$$Y = 16.01x + 24.12$$

The above regression equation shows that in order to obtain a 6.9 per cent growth in overall value added by industrial sector during the Seventh Plan, gross value added by fuel minerals has to rise from Rs. 5.83 billion in 1984-85 to Rs. 7.23 billion in 1987-88, Rs. 7.83 billion in 1988-89 and Rs. 8.47 billion in 1989-90, the terminal year of the Seventh Plan. This shows that the value added by fuel minerals has to grow at the rate of 7.8 per cent annually in order to achieve the targetted level of value added by overall industrial sector.

(c) Value added by Railways and value added by overall industrial sector:

Railways as we have already discussed have lot of bearing on the overall industrial growth. This is also corroborated by our present study. Taking 15 years data of gross value added i.e. 1970-71 to 1984-85 for the above two variables, we arrive at a coefficient of *correlation (r) of 0.95. This is highly significant at 1 per* cent level of significance. The regression equation obtained by us is as follows:

$$Y = 12.90x - 16.71$$

The above equation shows that in order to obtain 6.9 per cent growth in gross value added in overall industrial sector, the value added by railways has to rise from Rs. 9.47 billion in 1984-85 to Rs. 12.13 billion in 1987-88, 12.88 billion in 1988-89 and Rs. 13.68 billion in 1989-90, the final year of the Seventh Plan. This implies that the gross value added by railways has to grow at the rate of 7.6 per cent annually between 1984-85 and 1989-90.

It is pertinent to mention here that the growth of gross value added by railways during 1982-83, 1983-84 and 1984-85 has been very poor, the growth rate being 2.3 per cent, (–) 0.5 per cent and 1.9 per cent respectively. This process needs to be reversed in order to achieve the targeted rate of growth of 6.9 per cent in value added in overall industrial sector. The growth in gross value added by railways has to be in the vicinity of 7.6 per cent in order to achieve the target of 6.9 per cent growth in overall industrial sector by the end of the Seventh Plan.

In view of the above findings, it may be concluded that an accelerated growth of infrastructure sector, especially of strategic infrastructural items like electricity, steel, coal, cement, crude petroleum and railways have a great bearing on the overall rate of industrial growth. This is all the more relevant since at the present point of time the country is having the benefit of huge stock of

Table I

Growth rates of output of various infrastructure industries and overall industrial production

Year	Growth Rates: Selected Infrastructure Industries (X)	Growth Rates: Industrial Production (Y)	Years	Growth Rates: Electricity Generation (X)	Production of Saleable Steel (X)	Production of Cement (X)	Revenue Earning Railway Freight movement in terms of of tonnes originating (X)	Overall Industrial Production (Y)
1	2	3	4	5	6	7	8	9
1972	7.1	5.6	1971-72	9.3	-1.4	4.8	1.3	5.7
1973	-1.1	0.9	1972-73	6.1	7.0	3.5	3.1	3.9
1974	5.8	0.7	1973-74	2.8	-9.1	-5.7	-7.5	0.8
1975	12.3	3 3	1974-75	5.5	12.5	0.4	7.1	3.2
1976	12.8	10.4	1975-76	13.9	17.9	17.0	13.4	6.7
1977	3.3	5 1	1976-77	11.6	19.8	8.9	8.0	9.4
1978	5.5	8.1	1977-78	3.3	-1 5	2.8	-0.8	4.2
1979	3 1	-0 2	1978-79	12.1	-3.4	0.2	-5.3	7.6
1980	-0.5	1.2	1979-80	2 1	-8.3	-9.0	-3.3	-1.7
1981	16.1	5.8	1980-81	5 7	4 1	5.5	1.5	4.0
1982	7 5	2.9	1981-82	10.1	14 2	12 0	12.9	9.3
1983	6.0	4.2	1982-83	5 8	1 7	11 0	3.4	3.2
1984	10.7	7.9	1983-84	7.6	-12.3	16 6	0.6	6.7
1985	7.9	10.3	1984-85	12.0	9.4	11.6	2.7	8.6
1986	8 5	5 1	1985-86	8.6	11.0	9.6	9.3	8.7

TABLE-II

Gross value added (at 1970-71 prices) by infrastructural sectors and overall Industrial sector

(Rs. Billion)

Years	Gross value added by: Electricity Sector (x)	Fuel Minerals (x)	Railways (x)	Overall Industiral Sector (Y)
1.	2	3	4	5
1970-71	3.84	2 61	5.97	59 86
1971-72	4.14	2.13	6.27	61.67
1972-73	4.31	2 77	6.51	64.28
1973-74	4 41	2 80	6.09	67.14
1974-75	4.62	2.96	6.32	68.91
1975-76	5.30	3.35	7 12	71.36
1976-77	5.86	3.37	7.64	77.52
1977-78	6.09	3 52	8.04	82.20
1978-79	6.81	3.54	8.05	90.72
1979-80	6.87	3.63	8.18	89.47
1980-81	7.25	3.95	8.42	90.03
1981-82	7.93	4 45	9.12	95.55
1982-83	8.43	4 79	9.33	102.22
1983-84	9.03	5.38	9.29	107.88
1984-85	10.06	5.83	9.47	114.45

trained and scientific manpower and diversified industrial structure. The country has also one of the highest rates of savings and capital formation in the world. Coupled with this, the growth-oriented industrial policy package initiated by the Government during the last few years provided our industrial economy the necessary stimulus and dynamism for achieving a higher level of industrial performance. Quite obviously, improvement in infrastructure has a great potential for accelerating the pace of industrial growth and rate of progress of the country's industrial economy.

How many are below poverty line

The Minister of State in the Ministry of Planning, Shri B.S. Engti, told the Lok Sabha on April 6, 1988 that uptil the end of 5th Five Year Plan, no separate outlays were earmarked for Poverty Alleviation Programmes. In the 6th Five Year Plan major Poverty Alleviation Programmes, i.e., Integrated Rural Development Programme (IRDP), National Rural Employment Programme (NREP) and Rural Landless Employment Guarantee Programme (RLEGP) constituted 3.8% of the total 6th Plan outlay. In the 7th Five Year Plan, allocations on these programmes constitute 3.7% of the total 7th Plan outlay.

In his written reply the Minister stated that according to the 7th Five Year Plan estimates, the percentage of population below poverty line is expected to come down from 36.9% in 1984-85 to 25.8% by 1989-90 and to 5% by the end of the century.

BOOK REVIEW

Land Reform Implementation: Land Reforms in Karnataka by M.A. Rajan, Hindustan Publishing Corporation, Delhi, 1986. Page 178, Price not stated.

During the Second Five Year Plan, several land reforms studies were sponsored by the Planning Commission. Then there was a lull. Reforms in agrarian relationship yet is important as an infrastructure development for the growth in agriculture. In this context, the present study is a welcome addition. And more so, it demonstrates the practical implementability of land legislation through Land Reforms Tribunals in the state of Karnataka, then a stronghold of the ruling party.

The author himself was intimately connected with the land enactments in Karnataka. He was Revenue Commissioner and later Adviser, Land Reforms In fact, the book shows the grip and the mastery of the subject by the author. It is authentic and well narrated. That lends credibility too.

Karnataka was formed in 1956. It consists of five regions and a total of 19 districts, The total number of Talukas is 175. Madras, Hyderabad and Koorg were assimilated. So also their land legislations. Not an easy task indeed. Unification of land legisations was the first important task before the Government. Some footwork was done by B.D. Jatti Committee called Mysore Tenancy and Agricultural Land Law Committee 1957. That was the origin of the 1961 bill which became law in 1962. The 1974 Law was a further improvement on the 1961 Land Reforms Act.

The 1961 Act had two important provisions, viz., (1) resumption and (2) ceiling on land. The surplus land was to be redistributed. The entire burden was taken by the Land Tribunals which were quasi judicial and had representatives at the taluka level. So this was also an experiment in decentralised planning, i.e. implementation. These Tribunals were the principal aim of implementing the 1961 (as amended in 1974) Land Reform Act. This had considerable political significance.

Karnataka Land Reform Act is considered a revolutionary step. But what is striking is the speedy implementation of the Act through Land Tribunals. The only other parallel in this is the Saurastra Land Reforms, which went a step further in financing the tenants to make land purchases effective. Resumption of land were prohibited in general, and those who wanted resumption had to apply to the Tribunals. A door to door survey was made, the record of rights were updated, and the implementation was taken up as a campaign in the state. Rents were also laid down on the basis of irrigated and dry areas. Yield was critical factor. The Revenue Departent and the Department of Land Records were involved in preparing and updating the Records of Rights. The 1974 Law prohibited advocates to appear before the Tribunals. It also laid down a procedure through which the landless agricultural workers and rural artisans can apply for the ownership of land on which they had a homestead. The Act was also included in the 9th Schedule, that is, it was made immune from challenge in the court of law on grounds of constitutional validity based upon fundamental rights.

The Act laid down the ceiling for each family of 5 persons or less at 27 'standard acres'. Compensation was paid as a multiple of net income. Compensation bove Rs. 2000 was paid through bonds carrying interest at 4½ per cent in 20 instalments. The 1974 Act laid down that no one except the soldiers and seamen can lease out land. Legal aid cell was set up in the Secretariat to assist the tenants.

The Land Tribunals received 961325 cases and disposed till the middle of 1982—956232 cases. The 1975 was the year when a spate of applications were received. Upto 1982, certificates of occupancy were issued to 443958 tenants. The average area per tenant was 4.3 acres. By June 1982, 282078 acres were declared surplus. The average cost per case came to Rs. 133, making it worthwhile for the Government to pursue vigorously its implementation. It also showed that the Government was committed to reorganising the agrarian structure and meant business in improving the lot of the tenants.

Rajan's study is useful and he has done great service in bringing to the notice of people outside Karnataka, the experience gained. He also gives useful tables. Lucid in style, confining himself to the subject matter, and keeping brevity in mind. the author has given an authentic account of land reform implementation. The book will be widely read by the politicians and the policy implementers. Well, now is the time when a body like the Planning Commission should bring together people from various states to examine the bottlenecks in land laws implementation in several states; or commission a synthesis of the findings of land reform studies in India.

— S.M. SHAH

Lachit Barphukan (The victor of the battle of Saraighat) by Dr. Maheshwar Neog, published by Publications Division, Ministry of I & B; PP. 93 Rs.10

This slender paper-back is a well-written treatise on a singularly bright chapter of Assam's history. Depicting Assam's peculiar geography as a backdrop to penning down the exploits of the valiant Ahom General Lachit Barphukan, who proved to be as much a fighter for freedom from the expansionist designs of the Mughuls as Shivaji of Marathawad and Rana Pratap of Rajputana. He was a great generalissimo like General Zorawar Singh of Jammu and Kashmir. His victory in the battle of Saraighat will go down in history as a land mark of what a military genius and first rate administartor could do for the sacred soil of his mother-land.

Apart from other series of national significance which the Publications Division has been assiduous enough to bring out, this small volume is a welcome addition after "General Zorawar Singh" and is one of the books about our regional heroes who contributed their lot towards a natoinal endeavour the memories of which keep our armed forces in good morale, alert and in readiness for 'come what may".

Dr. Maheswar Neog a historian of great renown has been at great pains to sum up in a concise narrative, the varied expolits of a dedicated general of Ahom dynasty which flourished during the middle ages in Assam, the land of rugged hills, dense forests and turbulent Brahmputra. There is no denying that valiant heroes like Lachit Barphukan are born and nurtured in the cradle of rugged surrounding of nature which necessarily makes them grow and develop not only physically but also mentally to face the odds that befall them.

Expectedly this monogroph, with a readiability of its own will attract large readership.

R.P. Rahi

VOCATIONALISATION OF EDUCATION By Dr. G. Shivaruderappa. Published by Himalaya Publishing House, 'Ramdoot', Dr. Bhalerao Marg, Girgaon, Bombany 400 004. First published: 1988 Pages viii + 370. Price Rs. 190.00

Everything on vocationalisation of education has been said in this all-compreshensive book. This subject is the cornerstone of the new system of education at the plus two stage, with the aim of providing technical knowledge and work skills necessary for employment. In recent times it has increasingly been realised that education should harness the modern knowledge of science and technology for inculcating values and attitudes favourable for taking up industrial arts, skilled and semi-skilled jobs, and technical courses without considering them in any way inferior to white-collared jobs.

In its 14 chapters the author has dealt with the varied ramifications of vocational education in India and abroad. He rightly observes that the concept of vocational education has not been understood properly by many along with a number of principles involved in it. He goes on to add that a programme of education that omits its vocational character cannot be genuinely democratic. Indeed, equality of opportunity to grow and achieve to the extent of one's ability inevitably makes necessary a comprehensive programe of vocational education.

In India, vocationalisation of higher secondary education has now become one of the priority areas of education. However, it came about to be recognised only in the late Seventies and by now, about 11 States have introduced the vocational courses relevant to the socio-economic set up of the area. There is a brief description of these in the book. There is an interesting chapter on how integration of higher education can take place for effective vocational education. The author feels that there are various handicaps like shortage of staff, lack of modern media of teaching, shortage of space and equipment, etc. We need to build special education on a base of general education that has breadth and flexibility and multidisciplinerity. "Our world is changing so fa st that there is no guarantee to morrow." Individual training, therefore, must be wide enough to help people survive the ups and downs of demand of times.

Vocational education will greatly help in solving the unemployment problem in the country. The book will stimulate further discussion on this vital issue

Chandra Joshi

Significant progress by cottage and village industries

Khadi and village industries which are serviced through a wide network of over 31 thousand co-operative societies and covering about 1.5 lakh villages, made significant progress during 1986-87. The overall production during 1986-87 valued at Rs. 1,330 crore surpassed the target of Rs. 1,230 crore and registered a growth of around 16 percent over the previous year's level. The employment provided by Khadi and Village Industries is expected to have increased to 40.55 lakh persons in 1986-89 from 39 lakh persons in 1985-86.

Handicrafts, covering a wide range of artistic products produced goods during 1985-86 valued at Rs.8,700 crore and provided employment to 28 lakh persons. Their contribution to export earnings was of the order of Rs. 1,800 crore. Performance during 1986-87 is expected to be better in terms of both production and exports.

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Twin threat to our atmosphere

Biman Basu

The author here highlights the need to maintain the balance of various components of our atmosphere. He puts the mankind in red alert saying that fast depletion of ozone and continuous rise in the level of carbondioxide can threaten the very existence of human race on the earth. To avoid any impending climatological disaster, indiscriminate exploitation of nature must stop, he feels.

THE EARTH'S ATMOSPHERE IS A TENUOUS envelope of a mixture of gases that not only sustains all life on this planet but also plays a vital protective role. Our atmosphere is predominantly a mixture of life-giving oxygen and nitrogen which together make up almost 99 per cent of its volume. The rest is accounted for by carbon dioxide, water vapour and several other gases in trace amounts. Surprisingly, it is not the oxygen but two of the minor constitutents of our atmosphere—carbon dioxide and ozone— that hold the key to human survival. There is evidence to show that even small changes in the level of these two gases may have far reaching impact on global climate and human well-being

Carbon dioxide level

Geologists tell us that when the earth was formed about 4.5 billion years ago, the atmosphere didn't have any oxygen— it was mainly carbon dioxide, water vapour and methane released in large quantities by erupting volcanoes that dotted the surface of the young hot earth. After the earth cooled sufficiently the water vapour came down as torrential rain to fill the oceans and lakes. Oxygen appeared in the atmosphere much later- only after green plants evolved the photosynthetic process to convert carbon dioxide and water vapour into carbohydrates and release oxygen. As green plants proliferated the carbon dioxide level in the atmosphere gradually dropped. Carbon dioxide was also removed from the atmosphere by rain and various chemical processes that converted it into limestone and other carbonate rocks. Gradually, over millions of years, the atmospheric carbon dioxide level stabilized at around 290 parts per million (ppm) before the Industrial Revolution of the late nineteenth century. But since then, the level has been rising steadily because of large-scale burning of fossil fuels and today it stands at a little over 340 ppm. If this rate continues then according to one estimate, it may reach 400 ppm within the next 50 years, and that is what is worrying climatologists and environmental scientists.

'Greenhouse effect'

Even though present in tiny amounts, carbon dioxide and water vapour play a vital role in maintaining the delicate heat balance that determines the temperature on the surface of the earth. These two gases are transparent to visible solar radiation and so allow sunlight to pass through, but they prevent infrared (heat) radiation from escaping and thus effectively trap solar heat. The process is similar to what happens in a glass covered greenhouse where the temperature inside is artificially maintained at a higher temperature in winter by trapping solar heat for growing vegetables. Atmospheric carbon dioxide too, by trapping solar heat produces a 'greenhouse effect' and heats up the atmosphere. Scientists believe that without carbon dioxide in the atmosphere earth's mean temperature would have been as low as minus 23 degree Celsius rather than plus 15 degrees as it is today. But too much carbon dioxide is also bad; it can lead to too much heating of the atmosphere which may cause far reaching climatic changes.

Continuous rise

Normally, the carbon dioxide level in the atmosphere is maintained by several opposing processes. Plants, especially tropical forests, use up considerable amounts of the gas during photosynthesis. Rain washes it down into the rivers and seas from where it is often taken up by tiny plankton and converted into insoluble forms. The sources of carbon dioxide are also many. Volcanoes spew out enormous quantities of the gas when they erupt. But the largest source is the burning of fossil fuels such as coal, oil and gas and wood. Natural decay of biomass also produces large quantities of the gas. So the level of carbon dioxide at any time depends on both the extent of its production and of its removal from the

atmosphere. If the production rate goes up and the rate of removal slackens the net effect can only be a continuing rise in the level in atmosphere. And that is exactly what has been happening during the past several decades. The consumption of fossil fuels all over the world has gone up several throusand fold since the 1850s and at the same time millions of hectares of tropical forests, which are efficient 'sinks' for carbon dioxide, have been denuded of trees for comercial exploitation. As a result, the level of carbon dioxide has been steadily going up.

Climatological disaster

One consequence of this build up of carbon dioxide in the atmosphere has been an unmistakably steady rise in the mean global temperature. For example, there has been a rise of 0.6 degree Celsius in the mean global temperature since the turn the century. Although this is not much, scientists believe future changes to be sharper. According to one estimate, by A.D. 2100, the average global temperature may rise by as much as 5 degrees Celsius which could have disastrous results. One effect of such warming would be a rise in the sea level upto 200 cm which could inundate large coastal areas throughout the world.

The atmospheric warming would also affect global weather pattern. Computer modelling has shown that such warming may turn large areas of fertile land into deserts by disruption of rainfall pattern, while other areas which now get little rain may get torrential rains. Over all, scientists predict, if the carbon dioxide build up goes on at the present rate, there may be a climatological disaster. But the trend can be reversed, at least to some extent, by changing over to non-fossil fuel such as solar energy for heating and cooking, Extensive afforestation and conservation of the still extant tropical rain forests could also help in slowing down the carbon dioxide build up in future.

Ozone disruption

Another crucial atmospheric phenomenon that has been worrying environmental scientists is discovery of a ozone hole' over Antarctica. Ozone is an allotropic form of oxygen containing three atoms per molecule rather than two as in case of the common form of oxygen. Scientists have long known that there is a lot more ozone in the upper layers of the atmosphere called stratosphere than at sea level. Ozone is produced in the stratosphere by the action of high-energy ultraviotet radiation on oxygen, and being a good absorber of ultraviolet radiation its presence there effectively blocks out the sun's ultraviolet radiation. Ultraviolet radiation is dangerous to any life form because it is known to destroy living organisms and cause skin cancer in humans. The stratospheric ozone layer thus plays an important protective role for life on earth and its disruption is obviously fraught with dangerous consequences. It has been estimated that a one per cent drop in ozone level in the stratosphere could lead to as many as 10,000 more cases of skin cancer a year in the United States alone.

Ozone destroyer

The threat to the ozone layer first came to light in 1985 when scientists with the British Antarctic Survey discovered that the ozone level in the stratosphere over Antarctica dropped sharply during September, gradually becoming normal again in November. At first the phenomenon was thought to be a seasonal one, but recent studies have shown that man-made chemicals are a major cause of ozone deplection in the stratosphere.

There are several gaseous chemicals such as nitrogen oxides and methane which can destroy ozone. Both these gases are produced in plenty by natural processes. Lightning and volcanic eruptions release enormous quantities of nitrogen oxides, while methane is given off by several types of bacteria found in animal waste and paddy fields and marshy lands. However, being reactive both these gases are converted into other products in the atmosphere before they are able to reach the stratosphere. So, although nitrogen oxides and methane are ozone destroyers they are obviously not the cause of ozone depletion. But there is a group of man-made compounds known as chlorofluoro-carbons, or CFCs in short, which are almost indestructible themselves but can destroy ozone.

First synthesized in 1928, CFCs are inert gases which are widely used as refrigerants, cleaning fluids and aerosol propellants. Being inert these chemicals reach the stratosphere virtually intact. But after they reach the stratosphere sun's ultraviolet rays tear them apart, producing free chlorine atoms which then wreck havoc on ozone. For every chlorine atom released from CFC, scientists say, about 100,000 molecules of ozone are removed from the ozone layer. But many scientists doubted the role of CFCs as ozone destroyer. Chlorine, they argued, could also come from volcanoes.

Finding of studies

Conclusive evidence of CFCs being the main culprit came in September last year when US scientists mounted an airborne survey right in the stratosphere itself. Using two instrument-laden aircraft they flew several sorties at altitudes of 13,000m and 24, 000m collecting data on atmospheric gases, airborne particles and solar radiation high above Antarctica. Both aircraft were part of a scientific mission carried out by the US under the combined sponsorship of the National Aeronautics and Space Administration, the National Oceanic and Atmospheric Administration the National Science Foundation, and the Chemical Manufacturers Association. The objective of the mission was to find out why the ozone layer was badly depleted over Antarctica.

These latest studies have now conclusively proved that CFCs are indeed the main ozone destroyer because fluorine compounds detected in the stratosphere could not have come from any natural source. But a more disturbing finding was that the ozone hole over Antarctica was growing. Last year's data showed a depletion of as much as 50 per cent of the gas during September as against a previous high of 40 per cent in 1985.

(Contd on page 11)

Managing the environment, a ticklish problem

B.B. Vohra

Environment is an area of major concern not only for the developing but even for the developed countries. The present environmental situation presents four major areas of concern, i.e., preservation of species, provision of sanitation and drinking water, control of industrial pollution and better management of natural resources. Within the limited resources available to us we are not in a position to make a dent on all the problems/areas simultaneously. We, therefore, have to be extremely selective in our approach. The immediate task before the country, the author feels, is to prevant imminent ecological disaster. For this he suggests a three-point programme.

THE ENVIRONMENTAL MOVEMENT IN INDIA which, for all purposes, had its beginnings in 1972, the year of the Stockholm Conference, is today 15 years old. It would be appropriate, at this point of time, to take stock of the progress which the movement has made, the kind of challenges it faces in the future, and the manner in which these challenges may be met.

Gains of the movement

One of the important gains made during this period is the consensus that has emerged with regard to the major environmental issues which the country has to tackle. To begin with, our environmental thinking took its cue from the developed countries and perceived the preservation of the threatened species—of both flora and fauna— as important environmental objectives. However, when this matter was gone into by the Tiwari Committee in 1980 and later by the National Committee on Environmental Planning (NCEP) during 1981-83, two other objectives which have a great relevance for India and indeed for most other developing countries were also identified. These relate to the need to prevent any further degradation and depletion of the country's basic natural resources and life-support systems of land, water and vegetation; and to provide all human settlements with at least clean drinking water and a minimum level of sanitation.

It is a matter for gratification that there is a growing realisation that this 4-point core environmental programme is not a dispensable luxury but something which is vital for the country's long-term interests and indeed survival. The need to preserve the country's production base and to combat industrial pollution and insanitation in the interests of public health is self-evident. However, the doubts which were at one stage entertained with regard to wildlife protection, as a rather elitist past-time-indulged in by people who considered tigers to be more important than human beings-have since largely disappeared. It is now widely acknowledged that the conservation of the species is not something that needs to be taken up merely for aesthetic and cultural considerations, important enough though these are, but also for the severely practical reason that the preservation of genetic diversity must be ensured for solving the problems of human health and welfare which may arise in the future, and cannot be even visualised today. The recent dramatic advances in bio-technology have indeed invested this matter with a special significance.

Another development which deserves to be noticed is the slow but steady progress which has been made during the last 15 years towards the creating of institutional arrangements for the protection of the environment. The setting up of the National Committee for Environmental Planning and Coordination (NCEPC) in 1972 was followed a little later by the creation of the Central and State Pollution Control Boards. Thanks to the pioneering work done by the NCEPC in carrying out various environmental studies and spreading the message of environmental protection, all major political parties included, in their election manifestoes for the 1980 elections, pledges to protect the environment and maintain the ecological balance. It was in pursuance of such a pledge by the Congress (I) party that Mrs. Indira Gandhi set up the Tiwari Committee early in 1980 and, on its recommendations, created a separate Department

of Environment before the year was out and a few months later, the National Committee for Environmental Planning (NCEP) in place of the earlier NCEPC.

During the last decade and a half, the environmental movement has also received legislative recognition in the shape of laws for the prevention of water and air pollution. The promulgation of the Environment (Protection) Act of 1986 is a particularly important development as it seeks to make the agencies responsible for the monitoring and control of pollution more effective by conferring greater powers on them than they have hitherto enjoyed.

The movement has also gained some strength and credibility through the implementation of a number of programmes of environmental management. Project Tiger was initiated in 1973 and has succeeded in its objective of saving a threatened species and with it, the ecological balance of the concerned national parks and sanctuaries. The saving of the Silent Valley from submergence by an irrigation and hydel project and the protection of the Taj against air pollution-caused not only by the Mathura Refinery but also by local industrial units-are among the other achievements for which the movement can legitimately take credit.

Recent developments

More recently, the movement has received a big boost by way of two national programmes of great environmental significance which the Prime Minister announced in January 1985. These projects are for the cleaning of the Ganga and for a massive afforestation campaign in order to combat what the Prime Minister has described as a "major ecological and socio-economic crisis" faced by the nation. While the former project highlights the need to curb industrial and municipal pollution, the latter serves to stress the need to make better use of our natural resources. The Prime Minister's personal interest and involvement in both these projects has been of incalculable encouragement to the movement.

But perhaps the most gratifying feature of the current environmental scene is the very significant improvement in the level of popular awareness regarding environmental matters which has taken place since 1972. This awareness is to be particularly welcomed because it constitutes the best possible guarantee that over a period of time an informed public opinion will make it necessary for Governments, both at the Centre and in the States, to tackle the country's pressing environmental problems. It must however be stated that this achievement could not have been possible through the efforts of the Government alone but is primarily the work of a large number of selfless and dedicated environmentalists. These public spirited men and women, who have given freely of their time and energy to educate fellow citizens as well as the Government with regard to the dire implications of the continued neglect of the environment, have given the lie to the charge that it is not in the Indian ethos to think beyond narrow personal, family or caste interests.

Although the gains which have been made by the environmental movement during the last 15 years are by no means inconsiderable these must not be viewed in isolation but in the context of the challenges which lie ahead. These, as we shall see in a moment, are enormous in size as well as complex and will require a tremendous effort to overcome.

Wild life protection

As far as the protection of wildlife is concerned, our record is something we can be proud of. There are today over 300 National Parks, Sanctuaries and Biosphere Reserves and more are being planned. However, the lessons contained in the recent incidents at Ranthambhore and Bharatpur should not be lost sight of. It must be realised that the effective protection of sancturaries, parks and reserves, will, in the last resort, be possible only if the mounting pressures, of increasing human and animal populations on such areas are kept under reasonable contrel. This, in turn, can be done only if the management of our land and water resources— including forest and pasture resources— is vastly improved and if, in particular, an effective solution is found to the problem of excessive numbers of animals trying to graze off lands which already stand degraded. If these conditions are not fulfilled, there are bound, in the long run, to be violent clashes between the guardians of our well-maintained reserves and sanctuaries and villagers in search of pasture. The point to note is that the protection of sanctuaries against intrusions is something which, in the long run, will be possible only if conditions in the areas surrounding them do not become too desperate.

uncontrolled migration, a curse

As far as sanitation and the provision of clean drinking water are concerned, these tasks are being undertaken through time-bound programmes by State Public Health and Water Supply Organizations. However, it is necessary to look beyond the statistics of targets and achievements compiled by these authorities and recognise the fact that sanitary conditions are deteriorating rapidly in almost all towns and cities, primarily because of the continued influx of the rural poor who set up slum colonies and even start living on pavements in search of livelihood. Municipal bodies are finding it increasingly difficult to cater even to the minimum sanitary needs of such immigrants. Open defecation and urination have become familiar sights in and around slums, and constitute a grave threat to public health.

It is futile to imagine that the problems created by the influx of the rural poor into urban areas can be effectively tackled so long as it continues unchecked. The basic fact must be recognised that the management of urban areas can not be divorced from that of their rural hinterlands and in making a greater success of our rural development programmes, so that poor and landless farmers may find gainful employment in their own villages. Success in this field will however require a major shift in strategy. Instead of frittering away large

sums of money in penny packets, so to say, on a bewildering variety of integrated rural development schemes, rural employment generation schemes, special area development schemes, and poverty alleviation schemes, a concentrated and determined effort must be made to consolidate and use all available funds and surplus manpower to create-as was done in Mao's China-permanant productive assets aimed at improving the management and productivity of the local natural resources of land, water and vegetation. Experience has shown that whenever such an effort has been made it has made so much difference to local incomes that not only have the poor stopped moving into urban areas but have even started returning to their villages.

Create proper awareness

Problems of rural immigration apart, it must be admitted that if insanitation and filth are so much a part of the Indian scene, this is basically because we are not sufficiently intolerant of such conditions-in turn because most of us have known nothing better. In such a situation, 'Project Ganga' needs to be urgently supplemented by a nation-wide cleanliness drive which should aim at the transformation, in the first instance, of all religious places and pilgrim centres into models of cleanliness and then go on to tackle railway stations, bus stands, government offices and shopping centres etc.-in brief all the places where people congregate for one purpose or the other. It is only when people have been exposed to cleanliness and have learnt to appreciate it, that they will cooperate in cleaning up their own surroundings and will also demand that municipal bodies should show greater interest and efficiency in the proper collection and disposal of human and domestic wastes.

Pollution control

As far as industrial pollution is concerned, while a commendable job has been done by the Department of Environment in making environmental impact assessment studies and ensuring that no new big industries are allowed to come up which do not have built-in systems for pollution abatement and control, the problem of controlling pollution contributed by small new units and by existing plants has so far eluded solution. The 1986 Act will undoubtedly give greater legal powers to State Pollution Boards and other concerned authorities to penalise offenders. However, it must be recognised that punitive action alone will not suffice. If we are really serious about controlling industrial pollution, the carrot must be used along with the stick. In other words, offending plants must be assisted— by way of both suitable technical advice and soft loans— to instal pollution control devices within prescribed periods failing which they must be penalised on a progressive scale till they fall in line. This approach will however require a great deal of organisational effort as well as money, both of which it will take time to arrange. We need not, therefore, entertain any undue hope that the control of industrial pollution is around the corner. The control of air pollution caused b vehicular emissions will also require a very great deal o effort and money as it will involve the inspection o millions of vehicles and the rectification of engine which function poorly.

Poor resource management

Let us now turn to the most important element ir enviromental protection-the proper management of ou natural resources. The situation in this field is most alarming indeed. It must be stated, even at the risk o repetition, that fully one-third of our total land resource 226 mh which have any potential for biotic production ar today lying almost completely unproductive. Anothe one-third are degraded to a greater or lesser degree an are therefore only partially productive The country ha lost a great deal of its forest cover. What is more, of th rather less than 30 mh of good natural forests whic remain to us, at least 1.5 mh are still being lost eve year. In most parts of the country, the loss of tree cove is so severe that it has resulted in an unprecedente shortage of fuel for cooking and is forcing people to us cow-dung which is far more valuable as a fertiliser-as substitute fuel. The continued denudation of wate sheds has stripped them of enormous quantities o precious top soil and has led to excessive run-off losse during the monsoon season. It is this situation whic explains the premature siltation of our reservoirs as we as the recurring floods and droughts, which ar increasing both in frequency and severity, from whic we suffer In canal irrigated lands the efficiency of wate utilisation is only a fraction of what it should be; beside very considerable areas have been lost to water-loggin and salinisation. Finally, our over-worked ground wate resources, which today constitute a more importan source of irrigation than big surface projects, ar seriously threatened by depletion in many areas, largel as a result of excessive run-off losses on denuded lands

Although the Tiwari Committee had laid great stres on the need to ensure the optimal management o country's natural resources and had recommended th setting up of a Central Land Commission as a first ste towards this end, nothing tangible was done in thi direction till Shri Rajiv Gandhi set up the National Lan Use and Wastelands Development Council under hi own chairmanship early in 1985. The National Lan Use and Conservation Board and the Nationa Wastelands Development Boards were also set up a the same time. However, the present position is tha while some progress has definitely been made on th afforestation front, very little is being done to conserv soil and water by preventing excessive run-off losses o to deal with the menace of water-logging.

It must be stated that the overall situation in this field continues to be alarming in the extreme and is inflictin grievous damage on the national economy-damag which can perhaps be best compared to the effect whic an unchecked haemorrhage has on the health of human body. It must therefore be tackled with th utmost vigour and-to use a hackneyed phrase-on a war

footing. It may be mentioned, in this connection, that if we are today the 11th poorest country in the world in a list of 126, this is largely because of our failure to manage our natural resources properly.

Too serious to be taken lightly

Even in the field of forestry which is receiving a great deal of attention these days, the situation is such that inspite of all our efforts the rate at which new plantations are being established is still only around 1.7 mh per annum and is thus only marginally higher than the reported rate of depletion of 1.5 mh per annum. Considering that not all the new plantations will survive to maturity, and that maturity is in any case several years away, the danger of our losing all our remaining forests before new ones come up to take their place is very great indeed. We must, therefore, view the threat of deforestation and desertification with the utmost seriousness and evolve new responses while there is yet some time to do so.

What form should these responses take ? The very *first* thing that the situation demands is that all further illegal and unauthorised fellings should be stopped at all costs. Today such fellings are going on in all parts of the country, regardless of official instructions to the contrary. This is hardly surprising considering the very great laxity that has crept into our political and administrative machineries at all levels but particularly at the field level-the level which matters most. Since what is at stake is the very survival of the country, it should not be impossible for the Government to consult all political parties and evolve a consensus with regard to the manner in which the present rot should be stemmed. For stemmed it must be, and as quickly as possible, however drastic the methods that may have to be used.

The *second* matter which must receive urgent attention is how the pace of afforestation can be stepped up quickly. By now we have had enough experience of social forestry and wasteland development projects to know that "man-made" forests cost anything from Rs. 5000 to Rs. 10,000 per hectare-depending upon local conditions-to plant and maintain for the first three critical years. Since this cost is much too high to permit any large scale afforestation to be taken up in a hurry, it is clear that the "man-made" forest route to the restoration of vegetal cover to our bare lands is not a viable answer to our problem.

Promote natural regeneration

Fortunately, there is an alternative route available. It lies in making use of the powerful forces of natural regeneration, by creating conditions in which they can operate. This means, in effect, that denuded lands must be effectively protected against the ravages of grazing and browsing animals. Experience has shown that in all fenced-off areas, a great deal of natural growth of grasses, shrubs and trees takes place-through seeds already in the soil or borne by the wind or carried through bird and animal droppings-if only animals are not allowed to eat them up or trample them under while they are still tender.

Such a strategy requires that the seemingly intrac problem of uncontrolled grazing by local or non herds must be squarely faced if we are to restore ve cover to our bare soils at a cost the country can a and at a speed which will enable us to win the against time in which we are engaged. It needs t emphasised, in this connection, that once the vi circle created by animals trying to feed off exploited and exhausted lands is broken, the prote lands produce enough grasses within the course season or two to enable the animals to be stall-fed much higher level of nutrition.

Hope lies in the fact that unproductive lands ca protected and regenerated at little cost if entire vi communities cooperate with one another in an effc control grazing and to simultaneously conserve resources of land and water. However, such cooper is forthcoming only where the landless and the poo given a fair share in the additional production fron land-whether in the form of trees or grasses-and i additional water which becomes available as a resu better land management. Such conditions can how only be created quickly enough if the necessary ef both at social and administrative levels-is made revitalised administration at the field level.

The *third* initiative which needs to be taken launch a country-wide campaign to minimize both and run-off losses by carrying out, on as extensi scale as possible, works like contour trenching, con bunding and terracing and the construction of num less small storages ideally one in every mini catchn so that there many be enough moisture in the so support natural regeneration and so that we may b of the scourge of recurring droughts and floods.

Revitalise district administrati

At a time when district administration is badly down and has touched an all-time low-in many st District Collectors are not allowed to remain on jobs for more than a year on the average-it goes wit saying that such new and far-reaching initiatives have no chance of success, assuming of course, that get taken in the first place. But if we mean busi everything that comes in the way of better reso management must be swept away ruthlessly. We think and act big if we are to get out of the ecolo nose-dive in which we find ourselves today. There i instance, no reason why the requirements of the pr crisis situation should not lead us to carry out a dr revamping of district administration. Why shoul districts be manned by officers with say 15 to 20 service instead of by those with a mere 4 to 6 experience ? Why should not a District Collector re on the job for at least five years and why should n work be invested once again with the importance the glamour that it deserves ? Why cannot distric once again made into viable and dynamic uni administration through a real devolution of powe

way of democratic decentralisation and made capable of handling the difficult but infinitely rewarding work of resource management at the only level which is relevant for this purpose ?

In the ultimate analysis it will all boil down to whether we can generate the collective political and administrative will to save ourselves from certain disaster. The answer to this question has necessarily to be in the affirmative for no one in his right mind chooses the path of suicide. The time has indeed arrived for the Government of India to take the strongest possible initiatives in this field. Considering that the maintenance of the ecological stability of the country-and therefore of its ability to sustain future generations-is at least as important a responsibility as the protection of its political integrity and unity, there should be no hesitation in taking the most stringent measures necessary for preventing any further degradation of our natural resources.

Environmental imperatives

There are two other rather sobering throughts that may be mentioned in passing, in order to remove any lingering hopes which some people may entertain that there are any shortcuts to environmental protection or that it can be achieved in a painless manner, without having to take, and what is more, implement, hard decisions First, what kind of an environment can we hope for so long as our population continues to grow at over 2% per annum and threatens to reach the 1000 m mark by 2000 AD and to double itself from its present level of around 800 million before it stops growing? Should not population control be therefore considered as an area of environmental concern? Second, will the environmental movement ever have at its disposal the kind of financial resources it requires unless there is a marked reduction in tensions both at home and abroad so that we may find it possible to divert to more productive purposes some part of the enormous expenditures that are being incurred today on the maintenance of internal and external security? This is a problem that is bothering environmentalists everywhere, for while the global expenditure on defence has reached the $ 1000 billion a year mark, there seems to be never enough money, even in the West, for improving the environment.

To sum up, the challenges of environmental management in India are so colossal in nature, as compared with the resources available for meeting them, that we have no choice but to be highly selective and ruthlessly practical in approaching them. In the situation in which we are placed today, we must give top-most priority to the tasks which brook no delay and which if left unattended to, bid fair to destroy the country's ecology, let alone ruin its economy. These tasks relate to the need *firstly* for an immediate stoppage of all further illegal fellings, *secondly* for protecting all non-agricultural land against the ravages of uncontrolled grazing and *thirdly* for the conservation of soil water on a nation-wide scale-so that existing forest resources may be preserved, our denuded lands may acquire a vegetal cover in the minimum time and at minimum cost through the processes of natural regeneration, and so that we may be saved from floods as well as droughts. □□□

(Contd from page 6)

Repercussions

Confronted with this overwhelming evidence of the role of CFCs in ozone depletion, twentyfive industrialized nations including the United States last year signed an agreement under the sponsorship of the United Nations pledging to cut worldwide CFC production by half by the turn of the century.

Maintain the balance

Until now, the earth's climate has been a remarkably stable, self-correcting machine, taking care of all human misdemeanours, and assaults on the fragile biosphere. But now it is becoming increasingly clear that we cannot take nature for granted. For every step we take to exploit nature we have to pay a price. Carbon dioxide and ozone are innocuous components of our environment, but only as long as their concentration in the atmosphere remains within specific limits. Once the delicate balance is disrupted the consequences may be irrevocable. □□□

Committee for creating consumer awareness

Government is thinking of constituting a small committee of consumer activists which will look into the various ways and means of creating consumer awareness particularly the publicity aspects. The committee will have dialogues with the concerned officers of Central and State Governments, mass-media and other agencies for this purpose. This was stated by the Minister of State for Food and Civil Supplies, Shri Sukh Ram at the Second Meeting of the Central Consumer Protection Council in New Delhi on April 28, 1988.

Shri Sukh Ram gave a brief account of the progress made by the Central and State Governments in the implementation of Consumer Protection Act, 1986. In this connection he urged upon the States and UTs to constitute the quasi-judicial forums so that they start functioning for expeditious decisions in which compensation awarded to the consumers and their wide publicity would create great awareness amongst the consumers and would produce deterrant effect amongst the *manufacturers* He said that expeditious implementation of the Consumer Protection Act in States and UTs would provide prompt and inexpensive redressal to various consumer complaints.

Allow ecosystems to play their role

Dr. Subodh K. Gupta

The biosphere of the earth includes ecosystems of different natural and hierachichal levels. The tropical forests ecosystems is one of these. These ecosystems interact and interchange resulting in the balanced maintenence of the biosphere and life on earth. The author, in this article, examines the role of the tropical forests in the maintenance of this balance. He laments man's highhandedness towards these forests in the name of development and calls for a better understanding of the role of these different ecosystems in the maintenance and continuance of a balanced biosphere and life on earth.

THE TROPICAL ZONE CONTAINING ABOUT 40 per cent of the earth's surface lies between 230 27° North and 230 27° South. Climatically, the tropics are a belt of varying width on either side of the climatic equator which deviates from the grographic equator as a result of the distribution of land and ocean surfaces and geographic influences. The climatic equator is the line of maximum uniformity of humidity and temperature and is characterized by unpredictable variation of weather and climate. Seasonality increases with distance from the climatic equator.

The biosphere, which is the portion of the earth and its environment in which life exists and sustains itself, includes ecosystems of different natural and hierarchial levels. There is interaction and interchange between the different ecosystems. The multidirectional exchange within the biosphere involves energy in radiative, thermal, chemical and kinetic from and matter in gaseous, liquid or solid form. The whole biosphere is a complex of interdependent structures and processes. Changes in one part of an ecosystem or of the biosphere will eventually cause corresponding adjustments in others.

The forest ecosystem

Roughly 50 per cent of the total forested land area of the world is tropical forest. The forest ecosystems are sensitive to the annual precipitation, its reliability and its seasonal distribution. Their floristic, architecture, and structure, and their phenology vary with rainfall pattern. This variation is further modified by edaphic, orographic and biotic influences. With increasing seasonality away from climatic equator the forests gradually change through seasonal evergreen, semi-evergreen, semi-deciduous into deciduous forest, thorn forest or mainly succulent forest. In the deciduous forest zone, the natural forest is to a large extent replaced by pyroclimax high grass or short grass savannas; in the extremly xeromorphic woodlands, by scrub or semi-desert. Related to the variation problem is that of stability and fragility of the tropical forest ecosystems. The massive interence by man in recent times has exceeded the capacity of the self-maintainig regulating processes and as a result the dynamic stability has been destroyed over large parts of the humid tropics.

The micro-climate of tropical forests affects regional climates. The effects will be modified by corresponding effects emanating from urban sites, grasslands, croplands, plantations or water surfaces. Each of these land cover type has typical energy and mass exchanges and balances, and its effects extend for some distance in horizontal or verticle directions. The radiation exchange influences. stability or lability of air stratification Transfer of water vapour contents influences cloudiness or the internal water cycle. The surface roughness changes the direction of air flow, aerosol fall-out and the distribution of pollutants.

Influence of forests

The range of the environmental effects of forests increases with the the size of the source area and depends on the kind of the transported factor Atmospheric contents such as water vapour, CO_2, pollen grains or spores may affect the biosphere at continental scale. The tropical region, which represent 40 per cent of total earth surface contributes 58 per cent of water vapour into the global water cycle. The share of

the tropical ocean surface to the evaporation volume of the globe is 49 per cent and that of the tropical land surface 9 per cent. Water cycling in the atmosphere is rapid. Water exchanges influence the functioning of watersheds and the properites of the river sources through overland run-off, quick seepage flow, erosion and leeching.

Energy exhange is a valuable means of quantifying the local and regional effects of specific vegetation cover and land use. Forests are very efficient absorbents of visible and infra-red-radiations. The reflectivity of forest is 5-10 per cent lower than that of other soil covers. The high energy intake of forests is used primarily in the evapotranspiration processes. Consequetly water vapour flow to the air above the stands is intensive, and evaporation cooling avoids overheating of forested land. The vaporization energy is transported to the atmosphere outside the tropics as latent heat and there becomes available in the thermal balance after condensation of the water vapour. The tropical forests are intensive converters of energy and of water and , therefore, an important link in the thermodynamic system of the atmosphere.

The carbon cycle and balance in the biosphere are governed by two main processes: the photosynthetic assimilation of CO_2 by plants, and the metabolism and release of CO_2 by burning fossil or recent fuels. The influence of the tropical forests on the atmospheric carbon balance is indicated by the amounts stored in the biomass and the amounts cycled.

According to some estimates, the earth's primary production range is between about 120 and 160 x 109 tons of dry organic matter per year. Agricultural crops fix 15 per cent of this, forests and wastelands about 45 per cent and other vegetation 13 per cent, the remaining 27 per cent, which may be an underestimate, being fixed by photoplankton. The tropical forests covering about 4 per cent of the surface of the earth account for at least 5 per cent of the global terrestrial carbon fixation. They release through photosynthesis about 55.5 x 106 tons oxygen per year which however is balanced by their simultaneous oxyen consumption in respiration. It is assumed that fossil burning increases the CO_2 concentration of the atmosphere by 0.64 ppm/a. This is partly buffeted in the oceans but partly also fixed by photosynthesis in forests, Accordingly the highly productive tropical forest will serve as effective regulators of the CO_2 balance of the atmosphere.

Influence on climate

The importance of tropical forests for the maintenance of climate can not yet be quantified with any degree of reliance. Very little research has been carried out in natural and modified tropical forests on the interrelations between the floristic and architectural structure, the fractioning of matter and energy and their relevance to ecosystem stability and functioning. The few precise, detailed observations usually include only a few of the effects of ecosystem modification on the surrounding atmosphere. The conversion of naturall forests carries unknown and unacceptable ecological, economical and social risks.

More research needed

Forest records show that in India, we have about 23 per cent of the forest area where as it should be minimum 33.3 per cent according to our National Forest Policy Resolution of 1952. Satellite photographs of the Indian land mass have revealed that the country is losing its forest cover at an alarming rate and the total area under forests today may be as long as 40 million hectares. Actually good forest cover is only 10 per cent or so and this too is under heavy pressure, being destroyed by logging, shifting cultivation, grazing and fire, hydro-electric and thermal power generation, fast industralization and urbanisation. To maintain the ecological balance, there is urgent need for conservation, development and enlargement of these forests and resource base to meet the basic need of the people and the country. Scientific management and conservation not only as timber resource but also as a genetic resource now seem to be essential and hence an integral part of land use policy. However, before the management and socio-economic policies are drawn up, the internal dynamics including the structure and energy conserving efficiency of these forests should be investigated.

Conclusion

There is an urgent need for coordinated and integrated research into the exchange processes of matter and energy in relation to the ecosystem as a whole. Regional research projects should be established at carefully selected sites to study the following aspects which involve the exchange between the vegetation ecosystem and the biospheric data on floristic and architectural structure; productivity; storage, cycling and exchange of energy, water, organic matter and minerals; dynamics of plant and animal populations;quantification of the effects of man-made modifications on the structural and functional features of the ecosystem and its exchange with the biospheric environment. Unless these fundamental aspects are understood, assessment and prediction of the influence of different land cover types on the biosphere at local. regional and global level will remain speculative. □□□

Diamond mine in Chittorgarh

Diamond has been found in Kesharpura area of Pratapgarh Tehsil of Chittorgarh district in Rajasthan. Further investigation is in progress. The Directorate of Mines and Geology of Rajasthan are also carrying out investigations in other potential areas in Jhalawar and Kota districts of the State. □

This colossal waste and pollution of water !

V.K. Dhar

The author here attempts to study the control and prevention of water pollution. According to him, about 80 percent of water supply in our cities goes back to the drains in the shape of industrial and domestic wastes and ultimately pollutes potable water thus posing a great threat to health. The author however heaves a sigh of relief at the enactment of various laws including the Water Act, 1974 which provide legal action and punishment to those causing water pollution.

FROM TIME IMMEMORIAL RIVER FRONTS have been the most convenient locations for human habitation. Most of the major cities around the world are situated on river banks or close to water bodies. Not only is the water supply inadequate quantity, essential for the health and well-being of a community but a good water front offer facilities of water transport as well as the drainage. Varied from the larger perspectives of economic development water resources are agents of power generation and contribute directly, to productivity.

Curtailment of river size

However, over a period of time, with rapid urbanisation the intensity of use of river waters has often gone far beyond the tolerance limits. Rivers have been used for disposal for wastes and effluent resulting in pollution and destruction of natural life and amenities alongwith river bank. There has been serious curtailment of the size of the river due to indiscriminate urban growth and utilisation of available land right upto the banks of the river. This has led to the elimination of growth and vegetation, forests and other natural amenities that would sustain bird and animal life and are necessary for maintaining the ecological balance.

The extent of pollution depends on the rate of withdrawal and its utilisation, the volume of river flow or size of the water body, the volume of effluent discharged and the characteristics of pollutants, tolerance limits for their absorption as well as the ecological processes aided by the natural environment.

Discharge of pollutants

The situation regarding the pollutants is far more acute. While the volume of flow in the river continues to diminish, the source of pollution multiply due to increasing volume of effluents from industries and municipal sewers. The storm water seasonal nallahs have been converted into perennial sullage drains Arrangement for treatment of sewage and effluents are practically non-existent and have, in any case, failed to keep pace with sharp increase of the discharge of pollutants into the river. The cost of the anti-pollution measures continues to be almost prohibitive in view of the fact that even the existing water supply and sewerage services are run on considerable deficits in most town and cities in the country.

Level of contamination

In India, about 80 per cent of water supply of a city finds its way back into the drainage system as domestic and industrial waste and hundreads of million of litres of sullage are discharged into water bodies or nallahs without even being priority treated. According to the WHO estimates, about 80 per cent of Third World diseases are transmitted by dirty water. In fact, such is the level of contamination of water that if all the World's water were represented by a one gallon the quantity of safe drinking water would be only two litres. Further, according to the National Environment Engineering Institute (NEERI), 70 per cent of India's inland water is unfit for human consumption. This leads to a loss of 73 million working day every year, costing the national exchequer more than 600 crore per annum. The major cause of pollution in our country is human wastes discharged through the sewage and drains of different cities Only 7 per cent to 8 per cent of our country cities and towns are partially or fully sewered

and have treatment facilities covering one third of our urban population. The maximum of the existing sewage system have been constructed decades ago and have collapsed or clogged due to lack of attention and nearly all the treatment plant have stopped functioning a little after being installed due to lack of funds or non payment of electric bills.

Industrial pollution

Industrial pollution results to only 10 per cent to 15 per cent of the total river pollution at an average but it is quite deadly due to the highly toxic substances dumped into the rivers. The task of treating the waste before discharged into the river is done by only a few who can be counted on the finger tips. A large many of them evade it, considering it an unnecessary expenditure which has repeatedly shown its effects in many areas resulting in fish mortality, cattle deaths, spreading of deadly diseases like 'minimata' caused due to the mercury poisoning of the water, jaundice, gas problems, skin diseases and many more similar disease. Separate State and Central Boards for Prevention and Control of Water Pollution have been set up in States and Union Territories under the Water Act, 1974 which was enacted after the Water Pollution Control Act, 1969 in the Maharashtra State to control, regulate and prohibit discharge of effluents causing pollution

State Boards' instructions

The State Boards have powers of instituting prosecutions against all persons and agencies including the local bodies and Heads of Departments of Government (Section 48) in the event of their failing to supply any information under Section 20, for willfully giving false statement, obstructing any person acting on behalf of the State Board from discharging its duties, failing to observe the conditions laid down while giving consent under Section 25 or 26 or making any alterations without due authority or causing any interference with any device for proper monitoring and measurement or doing anything in violation of section 24 to permit discharge of effluent or obstructing the flow of a stream, and the failure to take action as required under Section 31 or 32.

Penalties

The penalties for various violations are usually imprisonment which may extend to three months or with fine upto five throusand rupees or both. In case the failure continues, the Court may impose a fine of one thousand rupees for every day after first conviction. The violation of Sections 24, 25 and 26 relating to causing pollution or infringment of the conditions to consent, however carry penalty of imprisonment of not less than six months but which may extend to six years with fine. The contravention of the same provisions within two years of the conviction attract a minimum terms of imprisonment of one year which may go upto seven years with fine.

In the event of a second conviction in all cases the Act makes (Section 46) a special provision for the Court ordering the publication in newspapers or otherwise, of the offender's name and place of residence alongwith the offence committed and the penalty imposed; the expenses being recoverable as part of the fine.

Apart from prosecution, Section 30 of the Act vests the Boards with the power to execute any work by its own agency in the event of the failure of any person to carry out any conditions imposed in according consent or otherwise in the matter of new or altered outlets or any new discharge of sewage or trade effluent after giving a thirty days notice for compliance. All expenses incurred for execution of such works are recoverable from the person concerned.

A peculiar provision

Section 33, however, makes a peculiar provision that may seriously limit the options of the Board. Under this Section if the Board apprehends pollution of a stream or well due to disposal of any matter therin or the likely disposal of any matter, it is required to move the Presidency Magistrate or a First Class Magistrate for passing orders to restrain a person from causing an existing or likely pollution or remove such matter from the stream and in the event of non-compliance authorise the Board to carry out removal or disposal of such matter and recover the net costs. It may be contended that the action under this Section should precede any other action to stop any person from polluting a stream. The Board themselves should be able to take this action followed if necessary by prosecution. Otherwise all steps to prohibit such pollution would remain held up till the court passes necessary orders, which may be considerably delayed.

Principal sources of pollution

The two principal sources of water pollution are the sewage and sullage from towns and cities and the industrial effluents. There are a large number of towns that are primarily non-industrial but have considerable volume of organic bio-degradable pollutants. But towns with industrial establishment present a more difficult problem. Not only the cities need provide a sewerage and treatment system but it is necessary to tackle each industrial establishment to control pollution and get them to treat their effluents before discharging it into the sewers or open drains.

The Central and State Boards are corporate statutory bodies having their own funds and budgets with powers to enter into contracts and to sue and be sued. Sections 34 and 35 provide for the Central and State Governments to make in each financial year provision for such contributions to the funds of the respective Central and State Boards, as they deem necessary to enable the Boards to perform their functions under the Act. The respective Governments are making appropriate provisions accordingly. But the costs of the programme are bound to be high and likely to increase considerably as the work and activities develop.

Water Cess Act, 1971

In order to meet these costs, the Parliament passed the Water (Prevention and Control of Pollution) Cess Act, 1977 which received the President's assent on 7th December, 1977. Section 3 of the new Act seeks to levy and collect a cess to be utilised for the purposes of the Water (Prevention and Control of Pollution) Act, 1974. The Cess has to be paid by—

a. every person carrying on any industry specified in Schedule I of the Act of 1977; and
b. every municipal corporation or municipality or Cantonment Board or any other body charged with the duty of supplying water.

The industries specified in the Schedule include ferrous and non-ferrous metallurgical industries, mining, ore processing, coal, petroleum, petro chemical and chemical industries, cement and ceramics, fertilisers, paper, textiles, power generation, and the processing of animal or vegetable products.

The basis for the assessment of cess and the maximum rates are notified in the given schedule for the Water consumed for :

a. Industrial cooling, spraying in mine pits or boiler feed;
b. Domestic purpose;
c. Processing whereby water gets polluted and the pullutants are easily bio-degradable; and
d. Processing whereby water gets polluted and the pullutants are not easily bio-degradable and are toxic.

Where a local authority is supplying water to an industry or another local authority liable to pay cess in respect of water supplied, the local authority first mentioned will not be liable for the payment of cess to that extent. Any person or local autority. which instals any plant for the treatment of sewage or effluent, shall be entitled to a rebate of 70 per cent of the amount of cess payable.

The cess is to be assessed by an officer or authority prescribed in this behalf and collected by such officers and authorities as may be notified by the State Government. Failure to make payment within the time specified in the order of assessment attracts a 12 per cent interest charge per annum till the amount is paid. In addition Section 11 provides for the imposition of a penalty not exceeding the amount of cess in arrears.

It is hard to find a perallel federal or State legislation that subjects the Municipal Governments or its own departments responsible for provision of public utilities, to such a system of taxation. It is the outcome of the general attitude of State and Central Government to regard the problems of municipal finances outside the general perspectives of public finance. It is hardly fair to pass on the burden of implementing a national programme on to the slender shoulders of municipal authorities, particularly when they have already to bear the enormous cost and liabilities for the provision management and financing of water supply and sewerage utilities which are far from being self paying propositions.

Control and prevention

The Control and Prevention of Water Pollution requires not only channelising the flow of city sullage and water waste into a sewerage system but also the installation of treatment plant and their continuous maintenance involving substantial capital investment and recurring costs. The local bodies cannot finance these works without the support and financial assistance from the Central and State Governments. Nor can they resort to independent borrowing unless the overall national five year plans provide for necessary allocations which are not likely to be available.

According to the Report on World Resources, 1987, only 30 per cent of urban population has been provided with sewerage facilities. The estimated cost to cover the shortfall of 112 million urban population to be sewared at the rate of Rs. 500 per capita would be approximately 5, 600 crore. These estimates are fairly conservative and do not take into account the cost of treatment for the uncollected water and the percentage of collected volume of waste water which is not treated. Nor do they reckon with an additional population that will be added to the urban areas by 1991.

The above mentioned funds to bridge the existing gap in sewerage and sewage treatment as of 1981 are not availbale. It is evident that unless positive steps are taken and necessary finances are made available no amount of prosecutions of urban local bodies are likely to ensure improvement in the quality of our water courses. Besides, the State Boards should prescribe the norms and standard which are considered practicable and acceptable standards for the distillers and other chemical industries association in order to have successful implementation of anti-pollution measures

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Environmental improvement of urban slums

Nine million slum dwellers are envisaged to be covered under the scheme of Environmental Improvement of Urban Slums at an estimated cost of Rs. 269.55 crore during the 7th Plan period, out of which 5.5 million slum dwellers were covered upto February 1988. The other 3.5 million will be covered during the remaining period of the Plan. This information was given by the Union Minister of Urban Development, Smt. Mohsina Kidwai, in the Lok Sabha recently.

Under the scheme, she said, basic amenities like drinking water supply, sewerage, storm water drains, community baths and latrines and street lighting were provided in urban slums. □□

Nuclear pollution of environment

Dr. Sidh Nath Srivastava

The article analyses the possible consequences of a nuclear war on the environment and mankind as a whole. The Nagasaki bomb, says the author, destroyed everything, especially, the environment in toto; but today's bomb, laments the author, will leave nothing undestroyed. The manufacture, maintenance and decommissioning of nuclear weapons/ plants are all frought with devastating consequences. What then is the purpose of such an excercise, he asks

THERE IS A FAIRLY UNIVERSAL sentiment that the use of nuclear weapon is clearly contrary to morality and that its production probably so, does not go for enough. These activities are not only opposed to morality but also to law and if the legal objection can be added to the moral, the argument against the use and the manufacture of these weapons will considerably be reinforced. Now the time is ripe to evaluate the responsibility of scientists who knowingly use their expertise for the construction of such weapons which has deleterious effect on mankind.

To this must be added the fact that more than 50 per cent of the skilled socientific manpower in the world is now engaged in the armaments industry. How appropriate it is that all this valuable skill should be devoted to the manufacture of weapons of death in a world of poverty is a question that must touch the scientific conscience.

Possible consequences

A meeting of biologists on the Long-Term World wide Biological consequences of Nuclear War held at Cambridge, Massachusets, in April, 1983, added frightening dimensions to those forecasts. Its report suggested that the long biological effects resulting from climatic changes may at least be as serious as the immediate ones. To summarise :—

Sub-freezing temperatures, low light levels, and high dose of ionizing and ultraviolet radiation extending for many months after a large-scale nuclear war could destroy the biological support systems of civilization, at least in the Northern Hemisphere. Productivity in natural and agricultural ecosystems could be severly restricted for a year or more. Post war survivors would face starvation as well as freezing conditions in the dark and be exposed to near-lethal does of radiation. If, as now seems possible, the Southern Hemisphere were affected also, global disruption of the biosphere could ensue. In any event, there would be severe consequences, even in the areas not affected directly, because of the inter dependence of the world economy. In either case the extinction of a large fraction of the earth's animals, plants, and micro-organism seems possbile. The population size of Homo Sapiens conceivably could be reduced to prehistoric levels or below, and extinction of the human species itself cannot be excluded.

Today's bomb more powerful

In comparison to present day nuclear weaponary, the Hiroshima bomb bears no relationship in thier power of devastation. It killed more people (80,000) than had died in all the bombing raids on Britain during World War II. That bomb was 12.5 Kiloton weapon, i.e. the equivalent of 12, 500 tons of T.M.T. high expolosive, To-day's weapons are measured not in thousands of tons' equivalent of T.N.T. but in millions— not in Kilotons but in megatons.

A forecast by the office of Technology Assessment concludes that 77 per cent of the American population could die from a single large-scale attack. This figure has been described as unrealistically optimistic for smaller countries like the United Kingdom because military and industrial activity is far more concentrated in towns and cities than in the United States. The casualities in a large scale nuclear war have been estimated in recent studies at 750 million deaths from blast alone, a total of about 1.1 billion deaths from the combined effects of blast fire and radiation and

approximately 1.1 billion injuries requiring medical attention.

Climatic consequences

The threshold for major climatic consequences may be very low. Only 100 megatons denoted over major urban centres can create sub-freezing land temperatures for months. A 5000 megaton can spread dust cloud and radio activity from the northern to the southern hemisphere. A serious threat to other species and to human survivors of the nuclear war will be that they will not be able to preserve the life styles of the period before. What then is the purpose of such an exercise ?

The star wars system

On 23 March 1983 President Ronald Reagan expressed the hope, in a dramatic speech, that the United States would be able (by virtue of new advances in such areas as Kinetic-energy projectiles, particle beams and lasers)to construct for itself a defence shield against incoming nuclear weapons. This claim, if correct, gives a new complexion to the arms debate, for it meant that superpowers were now not necessarily bound to plan their strategy on the basis that M.A.D. was the inevitable consequence of nuclear war.

Other experts maintain that if a Star Wars system could be made operational, it would' never be 100% effective. Thus a star war capacity might well intensify the arms race, since the Soviets would build more and more. ICBMs to ensure that at least some of their missiles penetrated U.S. defencees.

Even a small proportion of missiles filtering through the shield would be sufficient to achieve total destruction. Moreover the cost, variously estimated at between 500 billion and a trillion dollars, is well beyond the reach of even such an economy as that of the United States.

The proportion ratio of civilians affected by war is steadily rising due to highly explosive nature of weaponary. Of those killed in World War Ist only about 5 per cent were civilians. In the IInd World War this rises to about 50 per cent. In world war IIIrd, if it is expected, the percentage will be the 100 non-combatant population bears to the combtant. In Vietnam War, estimates of civilians injured ran to about 70 per cent.

A principal issue which attracts our attention with respect to our own country is whether India should be atomically armamented when our enemical neighbourhood is endowed with such weaponary. To uphold the ethical and moral spirit of our indigenous army, it is essential. If increasing menace of Islamic bomb can discourage our armies' moral, it is incumbent on the pretext of sophisticated and electronic weaponary to keep and manufacture atom bomb. The U.S.A. and U.S.S.R. stands side by side with atom bombs and this is why both discourage each other not to use it. Like wise India to keep blance of power in her own favour should maintain atoms to woo Pakistan and China with one hand. The increasing trend of atomic capacity does not mean that customary type of war would not happen. Even after two World Wars, there had been several skirmishes between several countries and millions of people died but they never used atom bomb. The U.S.A. Vs Vietnam U K. Vs Falkland, can be cited as examples, using traditional weaponary against each other.

To sum up, our discussion principally stands on nuclear explosion and environment. It was 8th August, 1945 when atom bomb of 1250 TNT dropped on Nagasaki in Japan destroyed everything but the environment in toto.

It left nothing except fire and dust. The menace of Nagasaki has never been minimsed even after 40 years It is Japan first which has decided to shutdown all its atomic reactors which is 32 in number and produces 24 percent of nations electricity. These reactors still contain 4000 tonnes of radio active compounds. It will take six years to dismantle it.

Decommissioning of nuclear reactor

All nuclear facilities must be docontaminated and decommissioned (D&D) at the end of their lives in order to prevent deliberate or inadvertent releases of radioactivity to the environment. Nuclear reactors have only a 30-year operating life. The reactor superstructure is built to withstand explosives, 300 miles-per-hour wind loads, seismic loads, and air-plane crashes. Conventional demolition techniques will be ineffective. (P.N. Skinner, 1977). Moreover, to complicate the issue, the radioactivity with the reactor must be contined during D&D.

According to P.N. Skinner the New York Attorney General's office has computed that the D&D for a typical 1000 MWE reactor will cost 316 million dollars. On Jan 25, 1983 Japan started demolition of its BWR Japan Power Demonstration Reactor (JPDR). It has a thermal output of 90,000 KW (45,000 KW initially). The total cost for decommissioning of JPDR is estimated about 20 billion yen. (Science & Technology in Japan, V. 2 N.6, 1983).

With large commercial reactors, the workers will have to cut the pressure vessel before they can remove it. But in case of shipping ports vessel, the first commercial nuclear power station in the U.S. in Pennsylvania and dedicated on May 26, 1958 met with accidents after 4 years of its commissioning. About its dismantling programmes after accidents, the U.S. Department of Energy believes that there is an easier way to dispose it off. As the demolition nears completion, writes Steve Olson, workers will erect a tower above pressure vessel and pour concrete into the cavity around the vessel, which will hoist the 7.70 ton steel and concrete package and place it on a heavy duty transporter that will then haul it to a barge on the ohio River. The entire four-year job, the Department of Energy calculates, can be done for about $ 80 Million.

(Contd on page 27)

Saving environment for human survival

Navin Chandra Joshi

Here, the author highlights the need for saving our environment, because he maintains that human survival depends upon the life activities of thousands of species of plants, animals and various micro-organisms. Only recently this fact has been recognised, resulting in the enactment of Environment (Protection) Act of 1986. But to achieve the desired effects of the Act, effective implementation of various environment protection laws and sustainable development accompanied by environmental conservation are very necessary, he feels.

THE ENVIRONMENT (PROTECTION) ACT, 1986 which came into force from November 19, 1986 lays down minimum national standards (MNS) in respect of seven industries for discharge of environmental pollutants. These standards had earlier been formulated by the Central Board for the Prevention and Control of Water Pollution but had no statutory effect. Even as the standards are now statutory and violation of any provision becomes a congizable offence, it is well-known that implementation of this law has been more in its breach than in its observance.

The industries covered by the MNS are caustic soda, man-made (synthetic) fibres, oil refineries, sugar, thermal power plants, cotton textiles and composite woollen mills. Measures are now under way to formulate standards in respect of other industries as well. The Central and State Pollution Boards, besides enforcing these standards in specific situations, are also empowered to prescribe more stringent standards. The law, which the Government seeks to implement, specifies five years imprisonment and a fine of Rs. one lakh for the first offence for not carrying out anti-pollution measures by the industrial units whether public or private. For the first time in the country, courts can take cognizance of offences under the Act on a complaint made by any person who has given a notice of not less than 60 days for the purpose

Discouraging factors

While at present only seven industries have been covered under the Act, there is an assurance that the cement industry would also soon come within the ambit of the Act. Though a number of anti-pollution measures are in vogue in several States, particularly applicable to the industrial sector, the effectiveness of such steps has always been in doubt. Besides, a lack of scientific monitoring and sucessful implementation of anti-pollution measures comes to a nought due to extraneous factors. This is particularly so in the case of chemicals, leather tanning and cement units. Moreover, prolonged litigation, undue political interference and similar other factors discourage genuine environmentalists to initiate steps against erring units, both in public and private sectors.

The Union Government recently announced the setting up of a high-power National Authority on Environment under the Department of Environment created 8 years ago. However, cases have not been wanting when several projects against the recommendations of expert groups were cleared due to pressure from the vested interests and politicians. While from time to time, technical hands and scientists were downgraded, the department's very ability to provide guidelines through Pollution Control Boards has been called into question. It is ironical that some years after the multi-crore Ganga Action Plan was put into operation, the Supreme Court, in a public interest litigation, had to order closing of 30 tanneries in Kanpur as they were discharging untreated effluents into the river. Even municipalities have not set up their treatment plants. Now the High Courts have been directed not to grant stay in criminal proceedings against industries in pollution cases and that licences be not given to industries

unless they had made adequate provision for treatment of trade effluents

Depleting jungles

Environment, whether one likes it or not, affects all of us. And yet, most of us know precious little about changes affecting the environment—dramatic shifts in the world's weather patterns or the detrimental effects of urban pollution. It is difficult to say precisely which is causing more havoc on enviornment—reckles industrialisation or deforestation. In a way, both act in collusion. It is estimated that six percent of the land area of the globe is occupied by the jungles,while half the plant and animal species of the world exist in tropical rain forests. Rough estimates of how much of the jungle has already fallen prey to man's wanton destruction put the figure as 11 million hectares a year. The total requirement of firewood by 2000 A. D. would be around 230 million tonnes. The enforcement of the Central and State laws to stop the violation would not solve the problem.The country now needs 590 million tonnes of green fodder and 485 tonnes of dry fodder as against the availability of 350 million tonnes of green fodder and 441 million tonnes of dry fodder. The requirement by 2000 A D is estimated to touch 780 million tonnes of green fodder and 600 million tonnes of dry fodder. Thus, the gap between the deforested area and the afforested area would widen unless adequate steps would be taken in time

Diversity in laws

More than deforestation, however, the harmful effects of industrialisation are beginning to be felt even in the most advanced countries. At present, the wood-based industry has long-term contracts with the State Governments for supply of wood. Wastelands may be leased out to the industry for raising captive plantations. This will involve the industry in the afforestation programme. The basic plan of the neo-forest policy should be preservation of environment but the policy is yet to be finalised. The penal provisions of the Indian Forest Act formulated as far back as 1927 are outdated. Some States have enacted their own laws and some others have amended the Central Act to suit their needs In 1976 the National Commission on Agriculture suggested a uniform central legislation for better protection of forests. The Central Government has consulted the States on the issue more than once, but it has not yet been able to introduce the legislation.

Non-sustainable development

In a way, much of the development in the world today is not sustainable. It is based upon the squandering of our 'biological' capital viz., soil, forests, animals, plant species, water and air. Even many of our economic, monetary and trade policies in sectors such as energy, agriculture, forestry and human settlements tend to induce and reinforce non-sustainable development patterns and practices. As some patterns of development have improved environmental conditions others have only tended to degrade them sometimes irreversibly.

In the last fifteen years or so, most of the developing countries have witnessed a steady increase in environmental degradation and many newly industrialising countries have experienced massive environmental deterioration, in the wake of sudden industrialisation and explosive urbanisation. The capacity of a number of developing countries to manage their environment, so as to secure the well-being of their people, is also coming under severe stress, following the rapid population growth, its uneven distribution and inadequate socio-economic development.

Environmental laws

In the early years after Independence, India struck out on a path of industrial and agricultrual development to eradicate centuries of poverty and this resulted in some neglect of environment, partly out of ignorance and partly out of unconcern. The initial laws that had a bearing on environment were actually concerned with industrial safety, occupational health and the discharge of pollutants. The first major environment related law in the country was the Water (Prevention and Control of Pollution) Act 1974 enacted by the Central Government to preserve the wholesomeness of water. Another was the Wildlife (Protection) Act of 1972 aimed at protecting the threatened wildlife. And the third is the Forest Conservation Act, 1980 to preserve forest wealth. Now we have the Environment (Protection) Act of 1986. No law or set of laws, however, can be complete in the dynamic process of development. New problems have arisen with industrial and scientific progress, necessitating the updating of laws.

Inter-dependence

Sustainable development in harmony with environment is the basic strategy adopted in the Seventh Five-Year Plan of India to ensure smooth process of urbanisation in the country. The Government of India issued instructions to create an awareness about environment from November 19, 1986 but then do we understand environment properly and do we realise that in planning ? In fact, if environment is to be taken into account, the plan may not materialise as a whole. Human survival depends upon the life activities of thousands of species of plants, animals and micro-organisms, and upon intricate physical and chemical reactions in the atmosphere, oceans, fresh water and so on. The vastness and complexity of this interdependence have already become evident with increasing human intervention into the lifegiving processes of our planet. All life is dependent on the interaction of matter and energy caried out in the earth's ecosystems. It is these interactions which we are altering even before we fully comprehend them. The people of the world must come to understand them, to preserve them and when altering them, to do it with care and wisdom.

Rapid urbanisation

In India, where only 24 per cent of its 765 million people live in urban areas, the population in cities grows

by 6,00,000 each month. Large cities like Bombay, Calcutta, Delhi and Madras continue to expand while rural migration to smaller metropolitan areas is on the rise. Rapid urbanisation is taking its toll. Major cities have recorded a substantial loss of forested areas around them. The capital city of Delhi has registered a staggering 60 per cent decline of closed forest cover between 1972-82. Transport vehicles have increased at a phenomenal pace while all types of industries have tended to conglomerate within and around the big cities. All these have added to the gravity of both air and water pollution.

Rational distribution

There is a fundamental conflict between traditional concepts of economic growth and the preservation of the environment. During the last century, uncontrolled growth in industrial production of environmentally harmful substances and products in some regions of the world has produced dangerous amounts of pollution and has been responsible for an inordinate waste of resources. At the same time, an increasing concentration, of economic power and industrial activity has led to centralisation, within a few nations, of the benefits of the earth's natural resources, and the international political influence that is derived from the control of these resources It has become clear that a more rational distribution of industrial power is necessary if the global problems of environment and society are to be solved. Such a redistribution would achieve at the same time a more equal appropriation of economic and political benefits among nations and individuals.

Saving river waters

As a developing country, India has had to experience a rapid rise in industrialisation. But until recently not much thought was given to the problem of industrial pollution. While effluents play havoc with river waters, belching chimneys dirty the atmosphere for miles around industrial units. It is only in recent years that the resultant danger has been recognised and legislation brought into force to prevent such damage. Rivers are often also polluted by sewage being emptied into them by towns and cities situated on their banks. The massive Ganga cleaning project which the Government has now undertaken with the help of sophisticated technology should go a long way in removing this danger and bringing life-sustaining hordes of fish back into the rivers. Pollution and the resultant destruction of fish and other marine life affect the chain of evolution which can have far-reaching repercussions over the food-chain in the world. Man can ignore this only at his peril.

What to do

The global environmental crisis has been contributed by both the grinding and pervasive poverty in the developing nations (called 'pollution of poverty') as well as of the humanity growing under sub-huamn conditions. Poverty itself has now become the 'biggest polluter'. The anatomy of the gathering environmental crisis is engulfed by this stark reality. It is, therefore, the need of the hour, to cry halt to the process of senseles environmental destruction, let the environmental cris itself should overwhelm us. Being a multi-dimension phenomenon, the environmental crisis must be dealt with as such. Only effective remedy for halting th growing hordes of environmental *refugees* 'sustainable' development accompanied by enviro mental conservation, New environmental ethos mu pervade at all levels of our decision-making as well allocation of funds for developmental goals.

Actually, programmes for environmental protectic and improvement are State Government responsibilitie However, they have not taken any interest at all. A such, it is for the Central Government to take initi steps and bear its direct responsibility through i various agencies. It will help in creating a data base f estimating the order of investments that would b required to deal with environomental problems on country-wide basis.

In fact, the problem of environmental degradation quite complex and there can be no single solution. Ar viable strategy must take into account not only th physical nature of the problem but also the huma factor involved. Moreover, mere legislation can nev be a solution unless it is enforced strictly, If o environment is to be saved from further degradatio there is an urgent need to remove lacunae in th implementation of environment protection law Otherwise, the vast majority will continue to pay th price for the misdeeds of a recalcitrant few. ☐☐☐

Export target for 1987-88 exceede

India's exports have exceeded the target of Rs. 13,8(crore set for the year 1987-88 in 11 months. Expor during April '87 to February '88 have reached a figure Rs. 13,939 crore as compared to Rs. 11,244 cro during the same period of 1986-87. Exports th registered an increase of about 24% in Rupee terms a 24.8% in Dollar terms. During the same period, India imports amounted to Rs. 19,880 crore, as compared Rs. 17,905 crore during April-February, 1986-8 showing an increase of 11% in Rupee terms and 11.8 in Dollar terms. The country's trade deficit th declined by Rs. 720.51 crore from Rs. 6661.33 cro during April-February, 1986-87 to Rs. 5940.82 crore April-February, 1987-88.

Exports in 1988-89 are projected to be about 20 higher than last year's.

The Federation of Indian Export Organisatio FIEO) has projected an export target of Rs. 4412 cro in 1988-89 and Rs. 5330 crore by 1989-90 by i Trading House and Export House Membe representing around 25% of the country's total expor

Can we afford to survive alone ?

Manoj Pandey

If the forest cover disappears from this globe and the wild life become extinct, how long man will survive alone ? This question has been examined by the author in the following article. Conservation of forests and preservation of wild life are in the focus the world over for quite some time as the man has realised that without them balance of nature will get greatly disturbed threatening his own existence on this planet. The author discusses the efforts being made by India and some world bodies in maintaining the ecological balance.

AFTER THE PHYSICAL ENVIRONMENT—land, water and air— the most valuable and yet the most vulnerable treasure on the earth is perhaps the life around man. Life : from microscopic organisms to giant trees and animals, not excluding the creatures buried in the mighty depths of oceans and the ones abounding in the Himalayan mountains. As many as twentyfive thousand plants and one thousand vertebrate animals are threatened with extinction. World Wildlife Fund says that the figure of such doomed lower plants and animals including fish, snails, insects, ferns and moulds runs into many lakhs. And thus a collection that took millions of years to build up is getting decimated in decades !

India has a rich and varied spectrum of life forms. However, the life faces danger of elimination perhaps more here than anywhere else. Ten percent of its flowering plant species are said to be endangered. Among animals, as many as eighty one species of mammals, fortyseven of birds, fifteen of reptiles, three of amphibians, and a large number of invertebrates are striving hard to exist. There were many who disappeared before they could be salvaged. Like the two-horned rhinoceros of the Sunderbans and the cheetah.

Depletion of forests

Extinction of some types of plants and animals, and appearance of new ones is an integral part of evolution. But man has upset this harmless, in fact envigorating process and hastened the loss of natural life to the extent that it cannot be replenished by Nature. As the civilisation grew, forests had to be cut. Spread of agriculture led to more and quicker forest loss. On the top of it came industrialisation with all its rapidity and rapacity. Whatever forest-cover has survived till date is fast vanishing with the ever-increasing pressure of population and lopsided developmental activities The monoculture forests that are being created these days give no hope. By their very nature, they cannot sustain the ecosystems necessary for propagation and survival of wild life and natural vegetation

And wild life

The saga of neglect, slow poisoning and genocide does not end here. Urbanisation and development are relentlessly plundering nature of its unguarded biotic heritage Poaching and hunting further decimate the wild life that is hiding in the jungles without interfering in human activities. Unchecked grazing reduces the limited grasslands and forests on which the wild herbivores subsist. Such human actions, in addition, destroy the ecological systerm necessary for survival of other wild animals and plants. This is why populations of even the mightiest of the living beings like lions and tigers have been reduced to bare numbers.

Then, there are seemingly innocuous human activities working against the wild life and life supporting systems. Pesticides kill all insects and worms coming in their contact. Pollution strangulates to death the sensitive plants and animals, espectially the aquatic life. Habitations disturb movement of migratory animals who then cannot breed properly. And the list continues.

Why this cry ?

Why raise a hue and cry over extinction of life-forms

not useful or remotely useful to mankind, you may ask: Why preserve a wild, very low yielding minor millet of Himalayan hills when the much better wheat is there to eat? How could a dodo have helped humanity if it were not extinct ? (This Mauritian bird became extinct because of uncontrolled hunting some three centuries ago).

Frankly, I would not like to keep the ugly dodo in my parrot-cage, nor would I care to take mandua and minor millets as long as I get rice and wheat. However, I am told by ecologists, such lowly creatures might reveal their usefulness in not-so-obvious but radical ways. For me, and for my posterity.

H.Y.V

In the farming sector, for example. The high-yielding crop varteties become susceptible to diseases and pests after a few years of release to the farmers. The diseases and pests become immune to the pesticides, fungicides ans similar other chemicals. Then the breeders fall back on the wild, primitive relatives of the crops and introduce their resistence genes into the crops.

Hardy plants

Wild plants are known for their hardiness and tolerance to bad weather conditions also. Such characters have special usefulness to India where agriculture is predominantly rainfed. Some years back, scientists tried to put hardy characteristics of rye (a lowyielding, wheat-like plant) into elite breadwheat varieties And yes, they created a new plant, triticale. Efforts are afoot to improve taste qualities and yield of triticale to the level of wheat while retaining the desirable rye-qualities.

Similarly, a number of other heritable traits are scattered in nature which can be used for medicinal, nutritional, industrial and other purposes. Some of them can be used in biotechnological processes. There is scope for producing fascinating end-products by introducing these characteristics into unlikely recipients by way of genetic engineering.

Varied species, must

While conservation of various forms of life is important, that of variability within a species is also equally vital, especially in the cultivated plants and domestic animals. In the global population of such plants and animals this store of genes, or germplasm, has enormous potential for improving the domesticated varieties. We may well recall how breeders crossed exotic types with the native ones to produce marvellous varieties of wheat and paddy on the one hand and poultry and dairy animals on the other.

I.U.C.N

Man realised the need to conserve the existing life when he had already eliminated a good deal of precious genetic resources from the earth. By World War II, only a few countries had taken measures to protect wild life, and those efforts were on a limited scale and confined to certain species only. In 1948, ecologists and scientists sat together and established the International Union for Conservation of Nature which later became the International Union for Conservation of Nature and Natural Resources. More coordination at international level led to launching of World Conservation Strategy in 1980 which, among other things, identified priority areas for conservation of natural resources. At present, a number of organisations are active throughout the world to protect and conserve natural resources of the planet.

Parks & sanctuaries

India had stong traditions of conserving plants and animals. Many kings and rulers also took measures to protect the vanishing wildlife. However, these were not sufficient to protect the vulnerable life from human assault. After independence, India woke up to the need to conserve her natural life. Indian Board of Wild Life was set up in 1952 to advise State governments on conservation measures. Based on Board's recommendation from time to time, a number of national parks and sanctuaries have been set up in the country. With the passing of Wild Life (Protection) Act in 1972, wild life, both within and outside the sanctuary areas, received legal protection against unwanted exploitation. With the worldwide launching of 'Man and Biosphere Programme' in 1973 work on biosphere reserves was started in india alongwith other countries. These reserves are being set up in different bio-geographic zones of the country to conserve the flora and fauna in their natural habitats. At present, India has 59 national parks and 254 wild life sanctuaries and thirteen biosphere reserves are in various stages of being established. One reserve has already come into being in Nilgiri hills, and four others are to come up soon, one each in Arunachal Pradesh, Meghalaya, hills of Uttar Pradesh and the Gulf of Mannar.

Project Tiger

India launched Project Tiger in 1973 for protecting the animal whose population had come down to 1823 from about 40,000 a century back. At present the project operates in fifteen large tracts of natural forests in different parts of the country. Because of conservation efforts in recent years, a number of wild cats, birds, rhino, wild buffalo, members of deer family and other animals have survived extinction,.

Conservation efforts

Special efforts have been made at global level to conserve all possible variation within crop plants too. The International Board for Plan Genetic Resources oversees and coordinates these activities in different countries. The work of genetic resources management involves collection of samples of wild, abandoned and rarely cultivated varieties from all over the world; their purification; documentation; multiplication and preservation. The collection serves both short and long term needs of plant breeders. So as to enhance the life

(Contd on page 27)

EIA helps environment management

P.K. Doraiswamy

Environment is a resource bundle which can tilt the balance of life either for good or for bad. Its management, says the author, is therefore, the call of the hour. An environment impact analysis (EIA) could be of help before projects are mooted and implemented. Proper EIA helps maintain balance in enviroment so that a proper and continuous adjustment is made in the rate of resource consumption and reversibility.

DOCTORS DEFINE 'PALPITATION' AS A condition in which a man becomes acutely aware of his breathing. In other words, a normal, healthy person breathes without being aware of it, and if breathing thrusts itself on his attention, then he has some psychological or physiological problem. In this view, we could say that mankind is now experiencing an environmental palpitation. For centuries and centuries, man has taken environment for granted. It is only in the second half of the present century that symptoms of palpitation, and even occasional missing of the heart-beat, are being noticed and looked for.

The definition

In a very broad or loose sense, environment could cover every conceivable thing on earth. But operationally, we could define environment as that bundle of resources which support, develop or enrich human life. With such a definition, why should there be any conflict at all over the need to protect and conserve the environment? The conflict arises not in an absolute but a relative sense. The conflict is between the resources of one people and the resources of another, between one resource and another, and between one generation and the next. The crux of the problem is, therefore, ensuring equity and sustainability in the consumption of resources.

Environmental problems

Human life is based on consumption of resources. Consumption, in our environmental context, means conversion of a resource from a usable to a non-usable form, temporarily, for long periods or permanently. Fortunately for us, a substantial part of this conversion process is reversible either by conscious human effort or by merely giving Mother Nature enough time. Thanks to the exponential rate of growth of population and economic development, the rate of resource consumption has left the rate of reversibility far behind. The conflict between the rate of consumption and the rate of reversibility is known as Environment problem.

Life itslef is a constant trade-off between the present and the future and there is no way of totally avoiding a trade-off and having everything one wants, whenever one wants it. The utmost that we can aim at is a knowledgeable, conscious trade-off based on deliberation instead of a creeping or a Catastrophic trade-off born of desperation. Environmental management, like all management, involves trade-off decisions, and, like all management, uses an appropriate tool for this purpose. Environmental Impact Analysis (EIA) is such a tool.

The term 'impact analysis' may give the wrong impression that it refers to a post-mortem. Actually, EIA is a feasibility report, just like the technical or financial feasibility reports prepared for projects *before* the project is implemented. It is, of course, always possible to do a post-project EIA but in environment the real danger is the irreversibility of some of the damage that might be caused unwittingly or out of ignorance or negligence. While a post-project EIA could form part of an Environmental Management Information System for monitoring, it cannot replace a pre-project environmental feasibility which is what EIA really should be.

Feasibilty, implicitly, includes sustainability. When we say that a project is financially feasible or technically feasible, we mean that it is feasible not just for today or a month or one year but on a sustainable basis over an appropriate life-time. Why should it be different for environmental feasibility, particularly when some of the resources can never be re-created by man or nature? In all feasibility studies, the most useful and crucial parts

are the future cost-benefit scenarios likely to result from the implementation of a project and the sensitivity analysis of the scenario's vulnerability to the various assumptions in the project. It is exactly the same in an EIA.

EIA covers three concepts—environment, impact and analysis. These need to be defined in operational terms.

Environment, we have said, is a resource bundle. In actual practice, we have to confine ourselves to an identifiable, manageable system and its bundle of resources. What this system is depends partly on practical considerations like available men, money and time, and partly on the state of technical knowledge. For example, if a multipurpose project is to be assessed, the system to be studied could be the project and its immediate neighbourhood, the entire river basin, the entire area benefited and so on depending on the aspect or factor which is the focus of our study. This focus is again influenced by our knowledge of the various technological and ecological parameters involved in, or affected by, the project. For example, the SO2 from the chimneys of UK power plants caused acid rain in Sweden and rediation from the Chernobyl nuclear accident is stated to have been detected in the Swedish milk power used in West Bengal ! At a more familiar level, the sewage water from our house flowing into our neighbour's house is no problem at all as long as the 'system' consists only of our house. But if it includes our neighbour's house also, then the problem could become explosive ! It should, therefore, be emphasised that defining the actual environmental or ecological system to be subjected to an EIA is a highly expert, multi-disciplinary job. Very often we are surprised to find that the original system boundaries have been drawn too narrowly.

The word 'impact' refers to the probable impact on, the environmental resources of the system studied. Environmental resources may be classified broadly as basic, developmental and cultural. These relate, respectively, to survival, well-being and quality of life. The following list is illustrative and not exhaustive :

(a) Basic	air land water flora
(b) Developmental	: Ocean minerals
(c) Cultural	. aesthetics (view, vista, scenery) heritage (monuments, natural wonders) Quality of life (absence of noise, smell)

Any depletion in (a) is life-threatening, depletion in (b) would retard economic development and depletion in (c) deprives us of our aesthetic and spiritual joys. A resource could fall in more than one category. For example, forests could come under 'Basic' if they contribute rainfall, under 'developmental' if they yield economically valuable products and under 'cultural' if they are regarded as a source of recreation.

Having defined the system boundaries and the relevant environmental resources, our analysis would examine the following types of effects on these resources.

depletion	(oil, coal)
displacement	(soil nutrients)
degradation	(water, soil, monuments).

For each type of effect, a further qualitative analysis would be done to know whether it is significant, urgent and reversible. Very often we do not know, particularly in respect of some of the hundreds of new chemicals being synthesised and introduced in the market every year, what the actual effects are, and how significant, urgent or reversible they are. It may take decades before the effects become noticeable. To this uncertainty, we should not add the certainty of known adverse effects resulting from a failure to do a proper EIA. If the resource involved is "basic", it would be safe to assume that effects of any unfamiliar imputs would be irreversible unless proved otherwise.

Thus, the whole rationale of an EIA is to prevent where possible, and to correct where it is too late to prevent, undue or irreversible damage to environmental resources. EIA achieves this by opening up the field of choice and exposing the spectrum of consequences attached to each choice so that a proper, if necessary continuous, adjustment is made in the rate of resource exploitation and life-style. The various choices could be

(a) to have the project or not
(b) change of location
(c) change of technology
(d) change of scope and size
(e) to incorporate operating precautions

The mechanics of an EIA consist broadly of the following steps:

(a) eco-system evaluation:	define system boundary, prepare inventory of resources, highlight specially sensitive areas
(b) classify resources :	Survival, developmental quality of life
(c) for the project, identify :	Inputs Process Outputs operating culture (assume normal & not ideal condition)
(d) constitute EIA team	: multi-disciplinary
(e) prepare maps, check-lists; etc.	· for collecting and exhibiting data

(f) classify resources according to the following framework :

		Resources affected				
		Basic			Developmental	Cultural
		Irreversible	Reversible quickly	Reversible long term		
Project parameters	Inputs					
	Process					
	Output					
	Operating culture					

(g) Quantify damage to, or loss of, resource whenever possible in physical or economic terms

(h) Indicate known, perceivable effects in the following form :

	Likely to lead to system collapse	Not likely to lead to system collapse
Reversible		
Irreversible		

(i) Indicate corrective steps whenever known

(j) Indicate areas of uncertainty/ignorance to be closely watched and monitored:

A convenient, easily understandable method of presenting the impact is through the Map Overlay techique. Transparent maps are prepared by the system, one for each environmental resource, and the intensity of adverse impact on the rsource in different parts of the system is allotted one colour and when all these transparent maps are overlaid, those parts of the system where the adverse impact is maximum or covers many resources will become visually obvious. It should also be possible, in these days of sophisticated electronics, to feed project parameters into a computerised system map and get a print-out of an impact overlay map. For each of several possible locations of a project, an impact overlay map could be made and the best location decided so as to minimise adverse environmental impact.

other issues

While the above indicates the basic methodology of EIA, the following are some general issues on which appropriate policies have to be adopted so as to be supportive of, and sensitise people to the need for, EIA:

(i) Agencies like DGTD (which clear technology) and term-lending institutions should insist on a proper EIA as part and parcel of the Project Report. To start with, for each major category of projects a basic EIA in a prescribed proforma should be insisted upon, to be supplemented by a more detailed study whenever indicated.

(ii) The syllabii of courses like MBA, BE and CA (which have close connection with, and relevance to, industrial management) should include a module on EIA

(iii) As in the case of temperature, humidity and rainfall, newspapers should publish frequently indicators of air and water purity and environmental degradation at least in major urban, industrial and specially sensitive areas so as to sensitise the general population to the importance of environmental protection and to mobilise public opinion.

(iv) Training courses for workers and Trade Union leaders should include a module on EIA

(v) Selected large, sensitive and important resource systems should be specially and continuously monitored to prevent the "29th day syndrome" from developing. (If a bacterium divides itself into two everyday and fills up a vessel in 30 days, on the 29th day the vessel is still half empty but in one day, it becomes full of bacteria' Examples would be lakes, rivers, rain forests, sea, wildlife, monuments, etc.

(vi) For every major project, whenever possible a contingency plan to shift it may be kept ready

(vii) Unfortunately, exploitation of natural resources is a PLAN scheme entitled to high priority in allocation of resources whereas conservation of existing resources usually is non-PLAN and is starved of funds. This distortion has to be corrected.

(viii) It is necessary for Government and financing institutions to develop expertise on EIA by starting training courses on EIA and subsidising EIA consultancy services. A proper certifying agency to establish and maintain professional standards in the EIA consultancy field is also necessary.

(ix) All EIA reports prepared for any project, public or private, should be public documents and every citizen should have the right to obtain a copy and a to publicise its findings.

(x) Company law should compel the Board of Directors to review, at every meeting, the status of the Company in the areas of energy conservation and environmental protection.

Problematic issues

Having said so much on EIA, it would be a major omission if some or the problematic issues connected with EIA are not mentioned. These, while very important and relevant, are issues on which decisions are not easy and have to be continuously upgraded based on feedback and according to circumstances. I am, therefore, merely raising them without attempting to answer them:

(a) When to insist on EIA and when not do? Should it be for all projects or only for projects of a

certain size, investment, in certain sensitive areas, etc ? Already, project formulation and implementation in our country is riddled with red-tape. Should EIA be another piece of routine red-tape added on to every project ?

(b) Which agency should do the EIA ? Should it be a Government Department, a private consultant, a body of techincal experts set up by Government, a permanent statutory, autonomous body or an ad hoc body constituted afresh for every project ?

(c) How to build up expertise on EIA and, what's more important and difficult, how to keep it up-to-date ?

(d) What standards of environmental protection should be considered the irreducible minimum to be enforced on projects—is it the BAT (Best Available Technology), or BPT (Best Practicable Technology) ? Or, should it be BPT to start with and BAT to be achieved within a specified time limit ?

(e) On whom to enforce the findings of EIA—on all, or only on selected large, existing projects or only on new projects ?

(f) How to evaluate costs and benefits associated with implementing the findings of an EIA, particularly when some of them are quantifiable and imputable with a market value and others are not ?

(g) Does the EIA benefit the well-to-do or the poor or everyone uniformuly ?

(h) What to do in the case of brand new products and technologies whose effects are yet unknown—to allow them or not ?

Even after all the above individual questions are answered, a final decision to order an EIA has still to be based on some kind of "best of judgment".

To sum up, environmental management involves a conscious trade-off betwen the values of sensational and sustainable development. The choice is ours but it has to be a choice born out of deliberation and not desperation, and using all available tools of management, including EIA. The fact that we are lagging behind the West in technology has this positive aspect, namely, that we need not repeat the same environmental mistakes. There may be limits to growth but, hopefully, no limits to learning. After hearing the thunder, let us not vainly search for the lightning which has already struck ! □□□

(Contd from page 18)

Besides shipping port, several other reactors in U.S. are shutdown, namely, the Indian Point 1 reactor in Westchester Country, New York, the Dresdon I reactor the three Mile Island 2 reactor, the Humboldt Bay reactor on the northern California coast and the San Onofre 1 reactor in Southern California. In 1979 the Three Mile Inland 2 reactor came to meltdown and it remains contaminated. It is reported that the 1 billion clean up will extend utill 1988, after which its owners will decide on the next course of action to undertake—whether to restart, "morhball" that is, guarding the plant after shutdown and dismantle it some years later, or dismantle the plant.

Steve Olson writes, "No law says that utilities must dismantle their reactors as soon as they stop operating. Utilities, in fact, have good reasons for putting off decommissioning as long as they can. The most obvious involves a problem all too familiar to the nuclear industry— what to do with the radio active wastes." The risk that the utility will not be there to decommission a plant at a future date has been foreseen. The U.S. Nuclear Regulatory Commission has proposed a rule requiring utilities to establish decommissioning funds, so that the people who use a reactor's electricity also pay the costs of decommissioning.

Competitive nuclear weaponary race is a dangerous one. it ruins the environments in toto and have deleterious biological effects on the new generations for many decades to come. Its dismantling poses problems and new pollution menace, hence its erection should be discouraged. □□□

(Contd from page 23)

of seeds or other propagating pants for long term preservation, they are stored in Gene Banks throughout the world. These are freely exchanged among breeders for use in their varietal improvement programmes. The International Rice Germplasm Centre at Manila, in the Philippines, is the biggest collection of genetic resources with about eighty thousand entries in its cold stores.

The National Bureau of Plant Genetic resources of India takes pride in its seed collection of nearly sixty thousand crop accessions. The capacity is being increased to 2, 50,000 and a National Facility for Plant Tissue Culture Repository is being established for conservation through tissue culture techniques. In addition to collecting indigenous germplasm from every nook and corner of the country, it exchanges samples with similar organisations in eighty other countries. National bureaux on similar lines are being established for conservation of livestock and fish genetic resources.

The efforts to conserve the variety of life on the earth are bolstered by the activities to save environment and ecosystems. Of late, governments have started giving due consideration to these aspects while formulating developmental projects, and awareness has also grown among the masses about ecological issues. Such positive trends generate the hope that man would be able to use the planet's resources, including biotic ones, for its welfare perpetually. The task of conservation, however, will remain unfinished. Perhaps man will have to be reminded always that his greed should not overpowr his sense of duty for the future generations.

Protect eco-system of Garhwal Himalayas

Ashutosh Gautam

Ablution at major pilgrimage centres/tourist spots, disposal of dead bodies, animal carcasses, untreated sewage, sedimentation etc. have polluted the snow-fed rivers of Garhwal Himalayas. All these polluting sources adversely affect the water quality of the rivers. It is hightime, says the author, that remedial action was taken for protecting the Himalayan ecology.

GARHWAL IS KNOW AS THE ABODE OF Hindu Gods where people have been coming for salvation It excels in having the biggest lotic aquatic environment in the form of snowfed and perenial rivers of different size; beside these there are hundreds of Gods. Gandheras, rills springs and fountains Important rivers are listed in *Table 1*.Among these the Bhagirathi and the Alaknanda are two most important tributaries of Ganga; considered as upper Ganga. The Bhagirathi owes its origin to Goumukh (Gangotri glacier) while Alaknanda to Alkapuri glacier. These two rivers meet at Deoprayag and finally form the Ganga.

Ablution at major pilgrimage centres, tourist spots and various other activities of our society along the river course are responsible for the changing complexion of the rivers in Garhwal. Disposal of dead bodies,animal carcasses, untreated sewage are the source of organic and biological pollution, while road constuction,dam construction, deforestation, etc. are the sources of Sediment pollution in river water Rapid pollution growth and other industrial demands have contributed n over-exploitation of the limited resources leading to escalated water pollution. Although the water of Garhwal's ivers is blessed with curative powers. the present rate f pollutants is high owing to which rivers undergo the hanging complexion. It is apparant from the behaviour tudy of various characterstics of river water that the oly riverine system of Garhwal now undergoes the rocess of degradation, which needs immediate curative easures.

Sedimentation

Unsound,mismanaged construction activities (like ad and dam) uncontrolled dumping of spoils to the river (particularly from tunel and road construction), all these activities result in accelerated sedimentation rate and the consequent pollution of snowfed rivers in the Garhwal.Sediment which causes turbidity hinders the penetration of the light due to which primary productivity suffers greatly as their metabolic activity is reduced. Sedimentation in the snowfed rivers have become a common phenomenon in the last few years The high altitude tributaries of the Ganga are the examples where the cold water fish habitats, spawning niches have been eroded to great extent by accelerated rate of sedimentation.

Deforestation

The pace of deforestation in the levee area of the rivers has been intensified in the name of various developmental activities. Due to rapid industrialization in the country the demand for natural resources increased resulting in fast deforestation. This process of deforestation results in landslides and soil erosion, which ultimately results in sedimentation and affects the aquatic environment adversely.

Stone collection

At present in Garhwal many stone crushers have been established due to which collection of stones and gravels from the bankside have now become a common thing. This leads to thermal pollution reverine system.

Sewage

Sewage is another source of biological and organic polluction of the rivers. It contains plethora, pathogenic and non-pathegenic organisms, which when discharged

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Air pollution by smoke- a national problem

Dr. (Mrs) Saroj Pande

In this article, the author who is a member of the Environmental Protection Council of the Delhi Administration, examines in depth air pollution caused by smoke in a crowded metropolitan city like Delhi, its causes and the effects it has on human beings as well as animals. She suggests some concrete measures that are needed to overcome the worsening situation.

EVERY INDIVIDUAL HAS NATURE'S GIFT of breathing pure atmospheric air but the accelerated and unplanned industrialisation has not only been detrimental to men but also to animals. In words of *Mrs. Indira Gandhi* "We in India, in partnership with people all over the world, must rededicate ourselves to the protection and wise management of our life sustaining environment". The air pollution is mainly due to the emergence of industrial pollutants and discharge of automobile vehicle smoke. According to Hinshaw H.C. Garland, L.H. (1963) "The air we breathe—like the food we eat—should be sanitary, wholesome and enjoyable " The respiratory system maintains more intimate and extensive contact with the external environment than any other portion of the human body. Despite the widely publicized fact that on a mass basis, the major pollutants are gaseous. The public views on environment as suffering from air pollution, is when enough particulate matter is present to cause a noticeable restriction of visibility.

This view was beautifully summed up, possibly twenty years ago, in a cartoon in the "New Yorker" Magazine, at a time when there had been quite a bit of publicity about the heavily polluted state of the air of New York city. The cartoon showed one of the very expensive rooftop gardens of the city, owned by a young and wealthy couple, who were about to eat an 'alfresco' dinner in their roof garden. He stood with his back to the table, gazing out over the view of the city. She was urging him "Dear, Let's eat now, before the food gets dirty".

First air pollution study

The first major air pollution study in the United States and very important study of Chicago was in 1912-1915, largely at the instigation of one Thomas Donn'elly. He had a printing plant immediately adjacent to one of the main rail road terminals and found that on many days, his freshly printed works were rendered unsaleable by the layer of soot that landed o them. He tried to begin a movement to electrify the railroads before they entered Chicago, as New York had already done. Sensing a threat, the local industries turned this into a major study of air quality in Chicago and all other aspects of the problem. In the short run, in their study, the particulate coading of the atmosphere was collected on filters and weighed. The filters were large soxhlet thimbles stuffed with cotton wool.

Chicago study, carried out 75 years ago, reported particle concentrations in milligram per standard cubic meter. It was simply viewed as good laboratory practice to reduce all gas volumes to standard conditions. Standards are set on the basis of effects on human health.

The cause & effect

Exhaust fumes are a well known factor causing air pollution. Ozone-contained smog was the cause of increased death rate due to respiratory and cardiovascular failures.

The environmental challenges need to be regulated through appropriate tools of legislation. Ineffective environmental legislation has aggravated the rising air pollution. Strict penalties on industries omitting discharge without treatment should be imposed through legal action. Delhi Administration is planning to take punitive action against motorists whose vehicles add to the already high level of air pollution in he city's atmosphere. For this they have made 'Pollution Squad' and 'Monitoring Centres' to determine exhaust constitution of individual vehicle.

At an earlier stage of pollution research, it was considered sufficient to measure the concentration of a pollutant in the geographical area as a reasonable surrogate of "dose" to an individual. It is now felt that this approach is not adquate. Alternatively, the goal is to estimate as closely as possible, the dose of the pollutant to the tissue, where dose is defined as the time concentration profile of the pollutant at its site of action and reflects both deposition and retention of the material.

What is air pollution

Air pollution has been defined by leading authorities as "community air pollution, i.e., the presence in the ambient atmosphere of substances produced by the activities of man, in concentration sufficient to interfere, directly or indirectly, with his comfort, safety, health or with the full use and enjoyment of his property." Someone else has said that "air pollution is anything in the air that we do not want to be there."

The auto exhaust emanating from gasoline contains carbon monoxide, carbon dioxide, sulphur dioxide, sulphuric acid, aldehyde, lead, nitro olefin, nitrogen dioxide, nitric oxide, ethanol, anthanthrene, Hydrocarbons, latter irradiated to ozone, benzene and carcinogens, and the diesel exhaust in addition contains 3:4 benzofluoranthene, 1:2:3:4 dibenzopyrene. Pentaphen, 11:12 benzo fluoran thene, 1:2:9:10, dibenzotetracene. It is well known that the peak Ozone concentrations during the season are affected by the prevailing meteorolgy as well as the precursor emissions that are Hydro carbons. Control measures of Hydro carbons ranged from reduction in emission from motor vehicle refuelling gaso-line, marketing turnover of the older motor vehicles to newer models, shifting from oil-based to water-based paints, etc. Year to year variability in meteorology could affect ozone concentrations by as much as 20%.

Acid rain

Sulphur dioxide, sulphuric acid and Hydrogen sulphide have their pollution effects and may cause "Acid rain" phenomenon, which has effects on man, animal and vegetation. Recently in China, counter measures against sulphur dioxide pollution were optimized. These include central heating system, applications of pelletized coal using more coal gas and more advanced boiler designs such as fluidised bed combustion, etc. to lower sulphur dioxide emission and replacing some consumptions of coal by fossil oil or natural gas etc.

In The Indian Institute of Technology, Delhi recently a Receptor-oriented Gaussian plume model and climatological dispersion model have been used to estimate the long-term concentrations of non-reactive pollutants due to emission from different areas in Delhi. Pattern of three major pollutants, viz., sulphur dioxide, the combustion of coal in locomotive engines, thermal power stations, and manufacturing of caustic soda, are constantly pouring sulphur dioxide, hydrogen fluride and chlorine as bye-products, damaging skin, vegetations and sensory organs.

Noteworthy industrial progress has been made during the forty-one-year span of post-Indepenent India, more specially so, in the field of automobiles, diesel engines, petroleum and allied products but is is still doubtful whether, attentive altertness the been aroused similar to the western countries, in eradication measures against air pollution.

American Conference of Governmental Industrial Hygientists has permitteed the M.A.C (Maximum Allowable Concentration) values in P.P.M (Part Per Million) by volume as follows:—

Carbon dioxide	5000 p.p.m
Carbon monoxide	100 p p m
(calculated as nitrogen dioxide)	25 p.p.m
Sulphur dioxide	5 p p m
Formaldehyde	5 p.p.m
Formaldehyde	5 p.p.m
Nitric Acid	10 p.p.m

No threshold limits have been given for smoke or non specific particular matters. In such places where air is contaminated, oxygen concentration should be slighly more than 20.5%.

Occupational health

In the session of W.H.O. conference, it was decided that Industrial health should be included in occupational health. Occupational health should contribute to the promotion and maintenance of highest degree of physical, mental and social well-being of workers in all occupations.

Sulphur dioxide, hydrogen fluoride and other volatile particulate materials have syergistic and inhibitory actions, acting together or in combination. A single component observation may not be guarantee of the 'adverse' effect not exceeding due to synergistic effect even when individually it is innocuous.

In view of the high incidence of nitrogen dioxide and hydro-carbons in auto exhausts, construction of apartments/houses should be denied in the vicinity of the nearby automobile traffics factory areas.

Effects of air pllution

The acute necessity of the prevention of air pollution can be assessed by the tremendous increase in the number of automobiles seen in India, where innumerable automobiles might have rolled by 1988 on the streets and national highways, emanating hazardous pollutants, containing tonnes of suplhur dioxide, 80 percent of which originated from the human efforts of oil and diesel combustion. The polluted air, led to chronic bronchitis in India, UK, Japan alongwith other respiratory ailments. Nitrogen dioxide Carbon Monoxide and suspended particulate matter have been investigated in Nov. December'85 and January, 1986.

Sources of pollution

Major sources of Sulphur Dioxide over Delhi are :—

(a) Domestic Coal burning:
(b) Industrial sources (coal or fuel oils);
(c) Vehicular teaffic; and
(d) Railway Shunting yards.

Major sources of suspended particulate matter are:—

(a) Vehicular Traffic,
(b) Industries; and
(c) Indraprastha Power Plant.

Major sources of Nitrogen Dioxide and Carbon Monoxide are:—

(a) Vehicular traffic, and
(b) Industries

The Centre for Atmospheric Sciences in IIT, Delhi is trying for the possibility of pollutants removal by the physical or chemical processes. It is included in their programme. Carbon monoxide concentration from four sites of Delhi were estimated, e.g., Town Hall, ITO, Nazafgarh and Connaught place, from 8 A.M. to 10 P.M. during winters and during summers in peack traffic hours in 1986-87 and 1987-88 from micro meteorological tower installed at IIT, Delhi. Carbon monoxide is one of the major pollutants in vehicle exhaust gases and its presence in urban air is solely due to traffic. Its concentration was from less than 5 to 50 P.M (Pars per million by volume). Smoke haze occurring in suburbs of Delhi shows increase in the frequency from early 1960-1970s. The area which was primarily rural till 1960 witnessed rapid urbanisation ad industrialization in 1960s and 1970s.

Dust

April onwards dust haze becomes a major air pollution problem over North-West India. Dust is a major source of air pollution during summer months. Maximum frequency of dust is observed over Punjab and West U.P. For measurement of air pollution, i.e., for estimating the level of air pollution, we need a combination of emission data and special meteorological data. Relevant elements are :—

1. Surface wind speed and direction.
2. Amount and nature of cloud cover.
3. The broad variations with height of wind and temperature.
4. Surface air temperature.
5. Surface air pressure distribution.
6. Duration of sunshine.
7. Intensity of solar radiation.

What pollution does

The vulnerability of the respiratory system to air pollutants is due to its wide surface area in relation to entire human skin. Mounting evidence on the role of diesel, gasoline and coal combustion products, both in the experimental and the clinical cases are available:

(a) *In animals :* Auto exhaust caused reduction in ciliary clearance rate, irritation of respiratory tract, and deoxygenation of blood, bronchial congestion, obstruction of air passages, interalveolar damage, increased susceptibility to infections, changes in the epithelium of the connective tissues and immuno suppression. Observations made on the diesel smoke exposures in mongrel dogs and rabbits in the laboratory of this institution, revealed marked cogestion of pulmonary vessels, thickening of reissessen's muscles, interaveolar walls; extensive emphysema with atelectasis, pulmonary oedema with hyaline memberane formation, hyperplasia of septal cells, being devoid of leucocytic infiltrations. The liver showed central and portal vein congestions, disruption of cord pattern and centrilobular degeneration. They also had conjunctivitis, dermatitis with punched out ulcerations in the extremitis and ears: dullness, lethargy, tonic and clonic convulsions.

(b) *Clinical Cases:* Chromate and formaldeyde impurities in diesel and naphtha fumes in the combustion products, caused dermatitis with ulcerations.

Eyes: The gasoline and its combustion products caused conjunctivities, keratitis, shedding of the epithelium and ophthalmoplegia.

Nervous system: Dullness, fatigue, muscular twitching, sluggish pupils, tremor or generalized convulsions epileptic, fits, meningeal and brain oedema.

Respiratory System: Irritation of throat, bronchitis, bronchospasm, respiratory distress, emphysema, oil pneumonia, tuberculosis and carcinoma. The inhalation of subtheresold level of nitrogen dioxide and the excess of ozone (1.8 mg/cu. meter) produced pulmonary oedema. In case of obscure pulmonary oedema in industrial areas, the possibility of ozone must be kept in view.

By infra-red gas analyser and other gadgets, hydrocarbons, carbon monoxide, carbon dioxide contents of the exhaust of car engine under load and subjected to speed of 50 m.p.h for 20 minutes or more, have ben measured, so that if these toxic fumes are in excess, preventive measures can be suggested.

What is needed

In *pari passu,* with the augmented manufacturing of automobiles, diesel engines, combustion of gasoline and diesel oil; and *apropos* to the eradication measures, existing elsewhere, it will be exciting to inculcate in this country, too, sense of social and hygienic consciousness, at national level, plausibly by promulgating some suitable enactment for preventing air pollution by auto exhausts, locomotives in the station yards. thermal power stations, etc. and training of the drivers by the Transport Department and Railway Ministry and the establishment of suitable laboratories in co-operation with the industrialists and philanthropists for active researches at all levels in eradicating the man-made hazards so that city dwellers donot become physically handicapped. ❑❑❑

World Bank-aided water and sanitation projects

The World Bank-aided water supply and sanitation projects at an estimated cost of Rs. 1,418.8 crore approximately are now under implementation in the States of Maharashtra, Rajasthan, Gujarat, Tamil Nadu and Kerala. The State Governments were required to make full provision of the cost of such projects in the State Plans, meet the expenditure thereon annually and thereafter seek reimbursement of a part of the cost from the Government of India out of the credit or loan received from the World Bank. ❑❑

Smoking, a great health hazard

Dr. (Col) K.L. Chopra

Smoking is a preventable menace, according to the author who points out that if it is not checked, coronary heart disease might assume epidemic proportions and be a major menacing health problem by 2000 A.D. It is the major cause of heart attacks and heart diseases not only to the smokers but even to those who donot smoke but inhale smoke exhaled by the smokers. The author suggests certain positive steps to put an end to this growing menace, specially among the younger generation. A nation-wide campaign through mass media against smoking can help us to achieve the objective, he feels.

SMOKING IS THE BIGGEST PREVENTABLE menace to mankind. Many serious diseases including lung cancer, bronchitis and heart attack are traced to smoking habits. Smoking in any form whether cigarette, cigar, pipe bidi or tobacco chewing has been identified as a major risk factor for heart attack. A recent Soviet study has shown that smoking reduces a man's life span by 2250 days (over six years). The increasing incidence of heart attack in India, fast spreading among younger generation has been largely on account of smoking habits. Nearly 30 million people in the country are estimated to be victims of heart disease. In Delhi alone, nearly a quarter million in the age group of 25 to 64 are suffering from coronary heart disease leading to angina and heart attack. In the capital, 0.9 million persons have high blood pressure, majority of them being smokers, which, if uncontrolled, can lead to heart attack. If smoking is not checked, Coronary Heart Disease may assume epidemic proportions in India and be a major menacing health problem. by the year 2000 AD. The only method to reduce smoking is to give it up completely. Promises to reduce smoking gradually, never come true.

Invitation to heart disease

The most important thing for smokers to reduce the chance of having a heart attack or having a second one is to stop smoking. People who smoke nearly 20 cigarettes a day are twice as likely to have a heart attack as non-smokers. In smokers of nearly 40 cigarettes a day specially in persons of over 50, who have been smoking for a number of years, the incidence of a heart attack is ten times greater than the non smokers.

It has been found that in persons under 45 years of age, 80 per cent of deaths during a heart attack are on account of smoking and chances of sudden death during a heart attack are twice as much in a smoker as a non-smoker. Sudden death occurs during a heart attack because the normal electrical stimulus that induces the heart beat in a synchronised manner becomes disorganised causing erratic and ineffective contractions called 'ventricular fibrillation'. The contractions are feeble and cannot pump blood into the various parts of the body. No pulse is felt and the heart may stop contracting altogether (cardiac arrest) unless effective resuscitative measures are at hand and are instituted immediately. The risk of having this grave complication is more in younger adults, specially those who smoke.

Non-smoking is prevention

It is, however, heartening to know that if one had not had any heart attack or angina earlier and he stops smoking, his chances of having a heart attack drop to that of a non-smoker in about six months time. Stopping of smoking is also the single most effective means of secondary prevention (recurrence of a heart attack) in heart patients.

Hazards of smoking

The harmful effects of smoking leading to heart disease are due to a number of factors. These are: *Nicotine* content of tobacco which is responsible for addiction, simulates secreation of a chemical called adrenaline which increases the heart rate, raises blood pressure and increases work load of the heart; *Carbon*

monoxide content of the smoke combines with haemoglobin in the red blood cells and impairs their capacity to transport oxygen to vital organs including heart muscles; smoking interferes with the functioning of platelets and increases the tendency of the blood to *clot*. Platelets are the components of blood which are involved in the clotting mechanism of blood. A thrombus or a clot in a narrowed portion of the coronary artery leads to a heart attack. Tobacco smoke also contains acetaldehyde. This can cause early wrinkling of the skin and also emphysema and fibrosis of the lungs which means *less oxygen supply* to the heart; Tobacco smoke also contains hydrocarbons which, besides causing cancer, can cause mutations of the cells leading to the formation of atherosclerotic plaques which is the cause of heart disease; Smoking also raises the level of *serum cholesterol* and high cholesterol which is a major risk factor for a heart attack; The risk of a heart attack among women smokers who use contraceptives is ten times more than the women who do not smoke.

Smoking also leads to pain and stiffness in the legs while walking. No amount of drugs can help. The only remedy is to give up smoking. If women smoke during pregnancy, there is an increased risk of death of the baby in the womb or soon after birth. Even where the bady survives, there is likelihood of delayed physical and intellectual development of the baby till he reaches 11 years of age.

Also passive smoking

Still worse the fact about smoking is that passive smoking is equally dangerous. Passive smokers are those who do not smoke but being in the company of smokers have to inhale smoke, exhaled by the smokers. They are equally prone to heart diseases, lung cancer and bronchitis, for no fault of theirs. It is seen that the incidence of these diseases is greater among women whose husbands are heavy smokers. As such every non smoker has a fundamental right to safeguard himself against the danger of passive smoking. "Your smoking is injurious to my health and I have a right to stop you from smoking" could be the slogan against passive smoking. It is a great threat to the health of individual, family and the society. In fact one has to choose between health and smoking including passive smoking. One cannot have both.

The long gap !

Another matter of grave concern about smoking is the long time interval between the start of smoking habit and the manifastation of deadly diseases like cancer, chronic bronchitis and heart attack. People are generally not aware of the link between smoking and the misery they have to undergo years later, and younger people often fall victim to this menacing habit under the wrong impression that they are immune to its disastrous effects not realising that they are heading towards a catastrophy. The prolonged incubation period of many tobacco related diseases has prevented recognition of the size of the threat and the grim picture of chronic and life threating diseases.

Meditation, the cure

During the initial stage after giving up smoking, one can feel the manifestation of mental stress and some amount of tension. His mind needs to be calmed down, and relaxed. Meditation has been found to be the most effective technique to meet such a situation. Twenty minutes of meditation twice a day will help one to react favourably and not to fall prey to the thoughts of resuming smoking. When one meditates he is in a state of 'restful alertness'. Scientific research in various universities in the USA and Germany has shown that level of adrenaline, cortisol and other hormones, bloodpressure, pluse rate, basal metabolic rate, all change for the better not only during meditation but also during the rest of the day in individuals who meditate regularly. Meditators therefore, meet a stressful situation much better than others and harmful effect of stress and tension are not likely to affect them. They experience peace within and without. These are helpful factors for giving up smoking. Most meditators give up smoking spontaneously.

Need for positive steps

Government will do well to realise the hazards of smoking and take positive steps to put an end to this growing habit among the people, specially the younger generation, if it does not want the heart disease to assume epidemic proportions by the turn of the century. It must be understood that government spends many times more on health programme than what it earns from revenue from tobacco and cigarette. This is besides the expenses incurred by individuals and unhappy homes on account of the terrible disease caused by smoking. A mere statutory warning of "health hazard" on cigarette packs is meaningless; even that warning is missing on bidi bundles and tobacco packs. Government should assume the role of a catalyst and also intervene directly against smoking. Concerned authorities should impose complete ban on smoking at public places like railway stations, airports, post offices, restaurants and hotels, government offices, clubs, schools and colleges. Reserving small areas for smokers will not serve any useful purpose. There should be complete ban on all advertisements for cigarettes and other forms of smoking including tobacco chewing through print, electronic and visual media. Support of the newspaper and film industry which are privately owned will not be lacking if an earnest appeal is issued by the government. But the Government controlled media should also be directed to initiate action against smoking. Sponsorship of sports events and TV serials by cigarette companies needs to be stopped forthwith, and TV and feature films showing stars smoking should be censored.

And nationwide campaign

There is also need to launch a nationwide campaign to create awareness among the public about hazards of smoking. In this task, mass communication media can really help. Anti-drug campaign has already been

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Strategy to boost oilseeds production

Dr. S.S. Khanna & Dr. M.P. Gupta

The per capita consumption of oils and fats per year in India was 4.6 kg in 1981-82 compared to the world's average of 7 kg. Similarly their availability per head per day is only 12 gm in India as against 18 gm recommended by F.A.O. The authors here point out that about 20 years ago we were exporters of vegetable oils but today we have to import them. During 1986-87 their import was worth Rs. 612 crore. They discuss here various constraints resulting in the wide fluctuation in oilseeds production and the strategies adopted since the Fourth Plan to boost oilseeds production and the targets set for 1988-89.

OILSEED PRODUCTION ASSUMES GREAT importance in India because of the gap in demand and supply, which forced our country to import vegetable oils to the tune of Rs. 612 crore in 1986-87. Needless to mention that it is well known that only about 20 years ago India was a net exporter of vegetable oils, while today we cannot even meet our own domestic demand. Unfortunately, the gap is continuously widening and causing a heavy drain on the foreign exchange reserves of the country. The per capita consumption of oils and fats per year in India was 4.6 kg in 1981-82 as against world's average of 7 kg. The per capita consumption in developed countries is 26 kg. The availability of oils and fats in our country is only 12 gm. per day per head as against a minimum requirement of 18 gm. recommended by F.A.O. Just to meet this minimum nutritional requirement, we should be producing one-and-a-half times as much oilseeds as the current production, not to say of meeting the demands of increasing population by the turn of century, when we will have to have more than double the production. The present situation needs immediate attention by developing area-based action plans through deep involvement of science and technology for boosting oilseed production.

Production

At present we have about 19 million hectares under oilseeds, the production of oilseeds is about 12 million tonnes and the average yield is about 650 kg/ha. Out of the nine oilseeds we grow in the country, groundnut and rapeseed-mustard together account for 75-80 per cent of the total oil production of the country. The most important states producing oilseeds in India are Gujarat, Andhra Pradesh, Madhya Pradesh, Maharashtra, Karnataka, Uttar Pradesh and Rajasthan In fact, 80 per cent of the total area under the oilseed crops is located in these seven states. Of the different oilseeds contributing to the oilseed basket of the country, about 50 per cent comes from groundnut, rapeseed accounts for 25 per cent, sesame for 16 per cent, safflower 5 per cent and niger 4 per cent.

Let us now turn to the world situation. Where does India stand with regard to the world edible oil economy? In 1980 the world production of oilseeds was about 182 million tonnes of seed, followed by cottonseed, which is 24 million tonnes, sunflower is 15.5 million tonnes followed by groundnut which is 14 million tonnes, rapeseedmustard is fifth with 12 million tonnes, olive 8 million tonnes, copra 5 million tonnes, sesamum about 3 million tonnes, palmoil about 4.5 million tonnes (nuts 2.0 million tonnes), linseed 3 million tonnes, castor 1 million and safflower 1 million tonnes. It is paradoxical that India, which is one of the major oilseed producing countries of the world, is not able to feed its people with regard to oils. Groundnut covers about 7 million hectares out of the 19 million hectares under oilseeds. India ranks first in the world as far as the acreage of groundnut is concerned. It is third in the world in rapessed-mustard, Canada being first, followed by China. India is the first in the world in area under linseed, sesamum and niger and second in castor and safflower.

Imports

In spite of these firsts and seconds, we are still importing oil. This is a paradox, and this is where there is a challenge for the scientists, planners and administra-

tors. It is heartening that soyabean and sunflower have been introduced in the country, and the happy augury is that the acreage is going up. In case of soyabean it was just 30,000 hectares sometimes back, now 9 lakh hectares are under soyabean. Similarly, area under sunflower has gone up to about 4 lakh hectares. Recently, through lot of brain storming session it has been felt that there is a need to intensify our efforts in oilseed growing by developing plans for specific crop (s) and area. We must bear in mind that more than 90 per cent of the oilseed are grown under rainfed conditions or on marginal lands, which is one of the very serious drawback and bottleneck. Another limiting factor is the plant protection problems. Several pests, hematodes and weeds infest the fields and bring down yields of the oilseeds. Since the farmer is not applying any inputs he does not bother about plant protection measures. The Third constraint is a scientific problem of energy supply to the plant. From 1 g of glucose, about 0.83 g. of starch is produced, and hence it is comparatively easy to increase the production of cereals which have lot of starch. But in case of proteins 1 g of glucose produces only 0.4g. of protein. In case of lipids, 1 g. glucose produces only 0.32 g. of lipids. From this, it is clear that oilseeds are very energy rich crops and thus without the required inputs more output cannot be expected. The fourth factor is the dearth of quality seeds, which is the most vital input. This is the only input where we really can move forward and once the quality seeds are provided, particularly of self pollinated crops, the farmer can use them for three-to-four years without any marked reduction in yield. Highest priority is to be accorded to this aspect. Another limiting factor is the poor plant population in the field because of poor germination. Yet another constraint is lack of proper arrangements for marketing, storage and processing, due to which there is considerable loss of oilseeds during post-harvest periods.

Yield potential of oilseeds

An examination of the average yield of various oilseed crops in India, in comparison with data on their inherent yield potentials and highest yields obtained elsewhere in the world (Table 1), should infuse some confidence that technologies and management system are available which if put into action in a systematized and well organised manner, may lead to an increase in the yield of most of these crops by at least two to three-fold. Oilseed crops have not received their due share of increase in area under irrigation and it is evident that irrigation alone is capable of doubling the yields. The institution of better management practices including attention to pest control and large-scale use of improved variety seeds along with irrigation would enable us to get higher productivity if not the higest achieved by other countries.

Constraints

The year to year fluctuations in production of oilseeds could be attributed to the following constraints and bottlenecks:

(a) Environmental Constraints: About 85.7 per cent of the area under oilseed crops is rainfed comprising mostly of marginal and submarginal lands with soils of poor fertility.

(b) Technological Constraints: Paucity of a large range of high yielding varieties, particularly the ones which could give high stable yields under rainfed conditions and resist or evade pests and diseases. Lack of improved farm implements, low cost technology for control of pests and diseases, appropriate post-harvest technology to prevent post-harvest losses and deterioratation in quality, are some of the technological constraints.

(c) Socio-Economic Constraints : Most of our farmers are small and marginal with little wherewithals to invest on various inputs. Oilseed crops are grown mostly under

Table 1

Yield potential of oilseeds

Crop	*No. of Varieties*	*Yield Range in Dry*	*potential kg/ha Irrigated*	*Average yield in India kg/ha*	*Highest Yield in the world kg/ha*
Groundnut	30	800-1800	2000-2500	756	5784 (Israel)
Rape/Mustard	28	800-1400	1500-2000	589	2826 (West Germany)
Sesame	17	400-800	—	181	2000 (Yugoslavia)
Sunflower	5	800-1000	Upto 2000	522	2209 (Italy)
Safflower	5	800-1500	Upto 2000	493	—
Soyabean	2	800-1000	1500-2000	863	4500 (U.S.A.)
Niger	8	300-350	—	236	—

poor crop management resulting in low yields. The non-realisation of the benefit of improved crop production technology is, therefore, more due to poor economic condition of the farmer.

(d) Organisational and Infrastructural Constraints Inadequate arrangements for production and distribution of quality seed, timely supply of various inputs, credit, irrigation, transfer of improved technology from research to farmer, storage, and marketing of oilseeds coupled with wide fluctuation in price, are some organisational and infrastructural defects standing in the way of achieving a rapid increase in oilseed production.

Five Year Plan policy, strategy etc. in oilseed development: Although the centrally sponsored scheme for oilseed development commenced in the year 1966, a systematic effort for promoting oilseed development did not begin till the Fourth Plan period, when a new strategy was launched covering all the aspects viz., research. extension and organisation.

Fourth Plan

The following were the main features of the Fourth Plan strategy:

(i) Extension of improved techniques as a package mainly for groundnut crop
(ii) Mass plant protection compaign on rapeseed mustard for the control of 'aphids'
(iii) Double cropping of groundnut in rice-fallows in the Southern States
(iv) Introduction of non-traditional crops, viz., sunflower and soyabean towards the closing years of the Fourth Plan.

Fifth Plan

The strategy during the Fifth Plan envisaged two lines of approach viz., (a) area basis and (b) problem oriented basis. The former approach was expected to attain a rapid growth in favourable years, while the latter was to ensure predictable levels of production even in unfavourable years. In order to achieve this objective, a three-pronged drive was launched druing the Fifth Plan.

In order to supplement the efforts of the State Governments to achieve the target of this order, the following centrally sponsored schemes were launched: (i) intensive oilseed development programme; (ii) extension of oilseed to new irrigated areas; and (iii) development of non-traditional oilseed crops, such as sunflower and soyabean,

Sixth Plan

Sixth Plan (1980-85) envisaged to increase the production of cultivated oilseeds from a base level of 101 lakh tonnes in 1979-80 (trendline estimate) to 130 lakh tonnes by 1984-85. To achieve the targeted production, the strategy adopted and development programmes and policies taken up were as follows:

The overall strategy adopted in the Sixth Plan consisted of the following:

(i) Increase in productivity of oilseed crops through varietal replacement, increased use of quality seed of improved varieties; increased use of fertilisers,
(2) expansion of area under oilseed crops, particularly rabi-summer groundnut and reapeseed-mustard, (3) expansion of area under oilseed crops, in various double/multiple cropping and inter-cropping systems, (4) distribution of large number of minikits of oilseed crops to farmer, (5) organising demonstration on improved package of practices on farmers' fields and (6) Price support.

Seventh Plan

Keeping in view the trend of production during the Sixth Plan period, the demand for vegetable oils in the Seventh Plan and the scope for expansion of area under oilseeds and increase in their productivity, a target of 18 million tonnes of oilseeds production has been kept for the Seventh Plan. To achieve this target, it is proposed to adopt a two-fold strategy,namely, productivity increase through better spread of technology and area increase through measures of inter-cropping, sequence cropping and relay cropping. The National Oilseeds Development Project, initiated in 1984-85, will be continued during the Seventh Plan period as a centrally sponsored scheme.

Implementation of NODP in 1984-85

in view of the need for achieving a substantial increase in production, the existing centrally sponsored schemes and the two special projects sanctioned for development of groundnut in Gujarat and soyabean in Madhya Pradesh have been reoriented and are merged into a compact National Oilseeds Development Project (NODP) for implementation during 1984-85. This project consists of two parts: (i) special projects on groundnut, rapeseed-mustard, soyabean and sunflower being implemented in 12 States; and (ii) intensive oilseeds development programme in respect of groundnut, rapeseed-mustard, soyabean, sunflower (in States not covered by special projects), sesame, safflower and niger in potential States. In all, the project is being implemented on 11.05 million ha. of targetted area in 17 States with a total outlay of Rs. 38 crores being met in full by the Government of India, thus, increasing the total outlay for oilseeds development during the Sixth Plan period to over Rs. 100 crores.

NDDB's Oilseeds Project

The National Dairy Development Board's Project (NDDB) for Restructuring of Edible Oils and Oilseeds Production and Marketing is to help cultivators to adopt production techniques which will decrease the vulnerability of their oilseed crops to climatic variations and offering year-to-year price stability to induce farmers to increase the production. This is to be achieved through integration of production, procure-

ment, processing and marketing of oilseeds by two-tier cooperative. It consists of oilseed growers cooperative federations at State level. The requisite funds for the project, i.e. more than Rs. 200 crores are to be generated through the sale of 2.50 lakh tonnes of gift oil which the Project Authority would receive from cooperative League of U.S.A. and Cooperative Union of Canada.

Centrally sponsored SMFDP

From 1983-84, another centrally sponsored scheme providing assistance to the small and marginal farmers has been implemented under the New 20-Point Programe of the Prime Minister. This scheme provides for about 100 oilseeds minikits per season per block (wherever possible).

Oilseed production thrust project

In order to achieve a higher growth rate in oilseed production and to narrow down the gap between demand and supply, the National Oilseeds Development Projects was restructured for implementation during the Seventh Plan to build in long term capabilities for sustained growth. The NODP has been approved for implementation during the Seventh Plan with a total outlay of Rs. 170 crores with Central share of Rs. 100 crores. The NODP has been reoriented to give greater latitude to the State Governments in the utilisation of funds for different components keeping in view their specific requirments and for introducing sub projects that might suit their priorities.

Besides, an Oilseed Production Thrust Project (OPTP) has been formulated in consultation with Planning Commission with a proposed outlay of Rs. 125.91 crores during 1987-88, 1988-89 and 1989-90 in 317 districts. The object is to make concerted efforts to increase production of four major oilseeds crops namely, groundnut, rapeseed-mustard, soyabean and sunflower, which account for 84% of the total oilseeds production in the country. The main components under the OPTP are additional seed production, block demonstrations, plant protection umbrella, supply of gypsum and seed-cum-fertiliser drills and provision for market support system. Provision would also be made under the Project for import of elite seed material buffer stocking of seed and augmentation of seed storage facilities. The States will be provided 100% assistance for the various component under the Project. By the end of the Seventh Plan period, it is expected that under OPTP, along with NODP, the production of oilseeds would be around 18.8 to 19.0 million tonnes.

A Technology Mission on Oilseeds was set up in 1986. Its main objective is to make the country self-reliant as early as possible in edible and non-edible oils through an integrated approach, involving different developmental, scientific input, banking and marketing agencies.

Strengthening of the implementation machinery and the monitoring and evaluation system has also been given special attention. A decision has been taken to undertake concurrent evaluation of the NODP. For effective monitoring, arrangements have been made for continuous feed back of detailed information regarding the progress of schemes from the local to the State and the Central level. It is proposed to strengthen the monitoring system further under the TMO.

For ensuring price support, NAFED has been appointed as the nodel agency for price support operations in oilseeds. Steps have been taken for appropriate strengthening of NAFED's infrastructure to carry out this role, along with State level agencies. It is pertinent that parity of support prices between oilseeds and competing crops has been adjusted over the years in favour of the former with a view to enhancing the incentive for cultivating oilseeds crops. At present, the oilseeds prices are ruling well above the support level.

To sum up, the basic objective of the oilseeds development programmes is to popularise modern technology in oilseeds production and raise its productivity through better management and extension support and with greater involvement of growers and their organisations.

Use of biotechnology

The production of oilseeds has been stagnating chiefly because the plant breeders have not been able to develop extraordinary crop varieties due to limited genetic variability available in these crops. The success achived by the Biotechnology Centre of the Indian Agricultural Research Institute, New Delhi in introducting genetic variability in plants in test tubes would help overcome this constraint. The regenerated plants have already been taken to the field and are growing luxuriantly in the fields. An valuation of large number of these valuable plants is now in progress to select the ones possessing desirable agronomic characteristics. The scientists, have, however, yet to ascertain whether these characterstics are inheritable through seed. The varieties which can withstand salt concentration have to be identified so that vast stretches of salt affected waste lands can be brought under these varieties.

Besides, it has become possible now to introduce oilseeds species which are not popularly grown in the country though their potential is well established. Rapeseed and Ethiopean mustards are the cases in point. Now, varieties of rapeseed are available which can fit into Indian agricultural systems. Similarly, Ethiopean mustard is known for its capacity to withstand drought and other adverse factors. It is believed to have great future in our country where oilseeds are generally cultivated under poor farming conditions.

Expansion of irrigated area under oilseeds notwithstanding the bulk of oilseeds output would continue to be raised under rainfed conditions. The basic problem with oilseeds thus remains that of stepping up the productivity of the rainfed crop. Eventhough some

improved varieties of oilseeds with higher yield potential have been identified, the non-availability of breeder and foundation seeds has been a major factor hampering their wider spread adoption. The concentration in seed production programmes has so far been on cereals, specially wheat and paddy and, as an indirect consequence there of, there has been a considerable shortfall in the availability of certified quality seeds in case of oilseeds. Once it is appreciated that improved seeds, even by themselves, can lead to substantial increase in production, the question of ensuring adequate availability of breeder, foundation and certified seed has to be resolved with a sense of urgency.

Targets for 1988-89

For the first time in the history of oilseeds production, the country's rabi production is slated to exceed kharif production this season. What is heartening is that this is being achieved during the century's worst drought in the country. This augurs well for the country as it will not only help ease the supply position in edible oils during the April-June lean period but prove a harbinger of a long-awaited breakthrough in this leguminous crop.

The total output of oilseeds at 108.95 lakh tonnes in 1987-88 shows a fall of 5.59 lakh tonnes. Among oilseeds, the groundnut crop has been the most hard hit with its production declining steeply from 60.59 lakh tonnes to 45.80 lakh tonnes. The sesame crop has also fallen from 4.43 lakh tonnes to 2.5 lakh tonnes. However, production of soyabean, niger seed, rapeseed-mustard, safflower and sunflower has increased during the year. The rabi oilseed has benefited from the late rains which helped the rapeseed-mustard crop.

A target of 15.66 million tonnes has been fixed for the production of nine oilseeds namely, groundnut, castor seed, sesamum, rapeseed-mustard, linseed, niger seed, safflower, sunflower and soyabean for the year 1988-89. It would be seen from the table 2 that a target of 7.93 million tonnes has been fixed for groundnut, 0.43 million tonnes for castor seed, 0.63 million tonnes or sesamum, 3.41 million tonnes for rapesee-mustard, 0.44 million tonnes for linseed, 0.21 million tonnes for niger seed, 0.63 million tonnes for sunflower and 0.59 and 1.23 million tonnes for soyabean. As only about 60 per cent irrigated land is available for oilseed production and the oilseed crop is generally grown by small and marginal farmers who had limited financial resources. These farmers are not, therefore, in a position to adopt measures to save their crops from diseases and pests which normally damage these crops heavily. Adequate incentive has to be given to the oilseed growers so that they are able to sustain higher levels of production. □

Table 2

Targets for Oilseeds (1988-89)

(In lakh tonnes)

States	*Ground-nut*	*Castor seed*	*Sesame*	*Rapeseed & Mustard*	*Linseed*	*Niger seed*	*Sunflower*	*Safflower*	*Soyabean*	*Total nine oilseeds*
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*
1. Andhra Pradesh	18.40	0 65	0.35	—	0.02	0.02	0.14	0.31	—	19.89
2. Assam	—	0.01	0.08	1.71	0.05	—	—	—	—	1.85
3. Bihar	0 68	0.02	0.09	0.74	0.44	0 15	—	0.05	—	2.17
4. Gujarat	17.76	2.94	0.47	2.52	—	—	—	—	—	23.69
5. Haryana	0 08	—	0.03	3.67	—	—	—	—	—	3.78
6. Karnataka	10 00	0 27	0.45	0 01	0.12	0.12	0.12	1.71	0.12	16.01
7. Madhya Pradesh	2.16	—	0.52	2 72	1.70	0.57	—	0.05	9.50	17.22
8. Maharashtra	7.68	0.03	0.56	0 02	0.62	0.24	4.25	1.79	0.24	15.43
9. Orissa	5.50	0.28	1.48	0 85	—	1.01	0.03	0.05	—	9.20
10. Punjab	0.45	—	0.06	2.03	0.07	—	—	—	—	2.61
11. Rajasthan	1.98	0.06	0.80	9.00	0.46	—	—	—	0.52	12.82
12. Tamil Nadu	13.15	0 10	0.55	—	—	—	—	0.20	—	14.00
13. Uttar Pradesh	1.30	0.02	0.17	9.00	0.75	—	0.18	0.18	1.90	13.50
14. West Bengal	0.16	—	0 70	1.86	0.15	0.02	—	0.08	0.03	3.00
15. Others	—	—	—	—	—	—	—	—	—	1.40
Total (1 to 15)	79.30	4.38	6.31	34 13	4.38	2.13	6.31	5.92	12.31	156.57

Anti-poverty & employment programmes strengthened in 1987-88

A MAJOR ACTIVITY UNDERTAKEN by the Planning Commission during 1987-88 was the Mid-Term Appraisal of the Seventh Five Year Plan. The Appraisal revealed that during the first two years of the Plan, the pace of public investment was maintained at the required level. Infrastructural constraints were eased and industrial growth sustained at record levels during the first three years of the Plan. Anti-poverty and employment programmes had been strengthened and human resources development given a new direction under the new National Policy on Education (NPE).

According to the Annual Report of Planning Commission for the year 1987-88, despite the relatively poor performance of agriculture, the economy grew at an average rate of 4.4 per cent during the first two years of the Plan. This was mainly because of improved performance of the manufacturing, infrastructural and service sectors.

It has, however, been pointed out that growth in agricultural production was retarded largely due to aberrant weather. A cause for concern however, was the evidence that growth in irrigation fell short of plan targets. Area under High Yielding Varieties (HYV) and fertiliser consumption also remained low. Measures to control population have been less successful than anticipated. Steps to increase agricultural growth and to reduce population growth, therefore, need special attention.

During the year 1987-88, says the Annual Report, the exceptionally severe drought/floods caused by the erratic south west monsoon was a severe strain on the national economy. Poor rainfall affected 63 per cent of the area in the country, resulting in substantial crop damages in 144 million hectares spread over 269 districts. The worst affected were Rajasthan, Gujarat and parts of Orissa where the impact of the year's drought was aggravated by droughts in the previous years. By timely execution of contingency plans and optimum use of water resources, the loss in Kharif production was somewhat mitigated.

As a part of the Government apparatus, to deal with the unprecedented difficulties caused by drought/floods in major parts of the country, a high level Committee on Relief under the Chairmanship of Secretary, Planning Commission, kept a continuous watch over the situation, and made prompt and appropriate recommendations for various measures in this regard. The Planning Commission officers were associated with drought relief teams sent to various States. 15 States/Union Territories were visited and an aggregate amount of Rs. 1453.28 crore was approved as Central assistance. Similarly, flood relief teams visited 10 States and an aggreate assistance of Rs. 312.36 crore was approved.

The Report further states that the States were authorised to divert funds from other sectors to irrigation and water management after fully utilising approved outlays and as a part of the special drought relief programme, an additional outlay of Rs. 236 crore was sanctioned for irrigation projects in 1987-88 to help complete selected projects which could be completed in the next two years. In addition, at the instance of the Prime Minister, an expert group headed by Dr. Y.K. Alagh, Member, Planning Commission prepared a Plan to provide special thrust to agricultural production in the next two years in order to achieve the revised Seventh Plan target.

According to the Report, a series of major initiatives were taken to promote planned growth, impart new directions to fiscal policies and increased generation of resources. As a result of these measures as well as effective implementation of various development programmes, not only was the growth rate in the economy sustained, but also there was buoyancy in public revenues. Further, as a result of a series of corrective measures, the balance of payments position which was under some pressure showed improvement.

The Report states that the Annual Plan for 1987-88 envisaged a total public sector outlay of Rs. 44,698 crore. This was a step-up of 14.5 per cent over the approved outlay of Rs. 39,052 crore for 1986-87. For the States and Union Territories it was Rs 19,656.64 crore as against Rs. 16, 751.53 crore for the previous year.

It also says that the outlays earmarked under priority programmes, namely Agriculture and Allied Services, Rural Development, specified Irrigation and Power Projects, Minor Irrigation, Command Area Development, Flood Control and Minimum Needs Programme are non-divertible. In the event of a State

Government's expenditure falling short against such outlays,Central assistance allocated to the State would be proportionately cut. Such a system has helped a great deal in ensuring investment expenditure in priority sectors.

The Report has further stated that the Mid-Term exercise on the Seventh Plan was itself to some extent an opportunity to review the progress of the Plan and generate signals for future planning, both for the next two years as well as for the Eighth Plan and beyond. At the same time, it was realised that a fresh input of ideas was necessary in order to evolve an optimal Plan to succeed the Seventh Five Year Plan. In this context, a paper entitled "Issues and studies relating to the formulation of the Eighth Plan" was prepared in the Planning Commission and discussed at length with eminent persons with experience in planning and developmental activities for an unstructured exchage of ideas on the formulation of the Eighth Plan.

The experts deliberated on various issues, which they felt needed to be taken care of while formulating the Eighth Plan. Self-reliance as a central goal, developmental efforts for increased agricultural growth coupled with growth in rural employment, poverty alleviation programmes, need for environmental protection, population control programmes, aspects relating to the public sector etc were discussed. Further studies are underway to evolve an appropriate approach to the Eighth Plan.

In addition to various other measures the establishment of a National Housing Bank and National Urban Infrastructure Development Corporation were initiated by the Planning Commission. The National Housing Bank has been set up as a subsidiary of the Reserve Bank of India with an initial capital outlay of Rs. 100 crore.

As the nodal agency for the formulation of development strategy, the Planning Commission is constantly engaged in upgrading its capabilities for analytical work in exploring development policy alternatives and feasible options from time to time. Issues relating to poverty, employment, income distribution, regional imbalances, financial policy, balance of payments, industrial policy, agricultural pricing policy and human resource development etc. are studied in detail. In preparing these studies, the Commission interacts with research institutions, academicians, experts and the best possible talent available for analysing key national problems.

(Courtesy, PIB, New Delhi)

(Contd from page 33)

launched and rightly so by the government on TV but it is not understood why anti-smoking campaign has not been started. Smoking in the long run claims far more number of lives and misery than drugs.

Government should also encourage and provide all help including funds to the voluntary and social organisations engaged in anti-smoking campaign. ❑❑

(Courtesy Spotlight, AIR)

(Contd from page 28)

to the rivers cause many diseases like Cholera, Dysentry, Typhoid, Collitis, etc. The input of sewage increases day by day and population grows rapidly. Rivers of the Garhwal are now receiving sewage from each levee town and village, which is a threat to the self resilience capacity of the river.

Conclusion

All these polluting sources adversely affect the water quality of riverine system which causes a decrease in the primary and secondary tropic levels of riverine ecosystem. As a result of drastic change in sedimentation rate, the failure of spawning or ineffective spawning of many fishes was observed. This high rate of sedimantation also blocks the gills of fishes, and as a result most of the fish population suffer greatly and finally die. Tor-Tor and Tor-putitora abundanly found in Garhwal are now slowly disappearing.

Hence, it is necessary to work well conceived plan for protecting our ecology from pollution, which may be harmful to us in future.

Table 1

Important Rivers of the Garhwal-Himalaya

Sl No	River	Origin
1	Vishnu Ganga	The crest of Mana peak
2.	Dhauli	Kungri Bungri's range
3	Alaknanda	Alkapuri Glacier
4	Mandakini	Dud-Ki Toli range
5	Mandakini	Dud-Ki Toli range
6	Pinder	Dud-Ki Toli range
7	Bhagirathi	Gaumukh Glacier
8	Asiganga	Gaumukh Glacier
9	Bhilangana	Khatling Glacier
10	Nayar	Khatling Glacier
11	Yamuna	Yamunotri Glacier
12	Keder Ganga	Kedarnath Peak

Biggest coke oven battery commissioned

The ninth Coke Oven Battery of Bhilai Steel Plant, the biggest in the country, was put on trial run on March 21, 1988. This marked completion of 4-million tonne expansion programme of the plant.

The battery has 67 ovens, 7 metres high and each with a useful volume of 41.6 cu.m. The earlier batteries in the plants are only 4.3 metres high with a volume of 21.6 cu.m.

The new battery is equipped with a coke sorting plant of 300 tonnes per hour capacity. With the commissioning of this battery, Bhilai Steel Plant will always have eight batteries in continuous operation with only one down for planned rebuilding and repairs. ❑❑

Salal Hydro-Electric Project—a dream come true

Chandrakala Shafiq, Yojana Correspondent

The Salal Hydro-electric project in J & K is a massive scheme to harness the water of river Chenab for the economic development of the region. The Rs. 583-crore project was taken up for implementation in 1970 and is being executed by the public sector N.T.P.C.

A group of trainees from the Indian Institute of Mass Communication recently visited the project. The author, who was one of the visiting trainees, gives below a vivid description of what she saw and experienced during a brief detour of the project.

WITH THE COMMISSIONING OF THE FIRST three units of Salal Hydro-Electric Project in Jammu, recently one more chapter has been added to the national efforts for planned development. The project was visualised in 1970 and it concretised in the form of 345 M.W. Salal Hydro-Electric Project, at river Chenab in Dhyangarh area of Jammu and Kashmir in February 1988 when the Prime Minister dedicated the project to the nation. History was created in Salal when three units were commissioned here within a short period of 21 days whereas at least five to six months are normally required for each unit to be commissioned. The project had already generated about 490 million units of power till 25th of the March this year. The power from the project is now flowing to the Northern grid.

Historical background

The Salal Project which was originally approved as a State project in August 1970 was entrusted to the Central Irrigation and Power Board for execution in the Central Sector. Later in May 1978 Salal project was handed over to the National Hydroelectric Power Corporation. On the river Chenab which has a huge hydropower potential, a series of hydroelectric projects are proposed to be taken up in the next few years. Salal is the first hydrolectric project to be commissioned on this river. Experience gained here will go a long way to help implement other projects in this basin. When N.T.P.C. took over this project only infrastructure facilities were available. Work on the major components had yet to start pending finalisation of agreement under the Indus Water Treaty. As a result of the various steps taken by the Government and the NTPC, the 1st phase of the project was commissioned by utilising the indigenous technology despite various geological problems.

Main features

A unique feature of this project is the rockfill dam, which is 118 metres high, 630 metres long and 500 metres wide across the river. This dam has not only enabled the adjoining hills to be safe but also diverted the Chenab river water to the huge reservoir built at the site.

Concrete Dam

A 113-metre high, 450-metre long concrete dam is perched atop the Dhyanagarh ridge with a radial gate controlled spillway for discharging 22,500 cusecs of flood flows and provided with penstock intakes. Construction of this Dam involved 12 lakh cubic metre of rock excavation and 15 lakh cubic metres of concrete placement, a task of commendable human ingenuity. Besides 3 67 lakh tonnes of cement and 16,000 tonnes of steel were required for the construction of the dam.

Tailrace tunnel

A 2.5 km. long, 11-metre diametre Horse Shoe shaped Tailrace Tunnel has also been constructed to ensure the discharge of water back into the river Chenab. Under the Indus Water Treaty between India and Pakistan, India cannot withhold water of river Chenab. There has to be a continuous flow of its water. The maximum rock cover for the tunnel is 600 metres. The Tunnel is connected to the main river 5 kms downstream of the power house.

Diversion tunnel

For construction of the dam, the mighty Chenab is diverted through a 9.14-metre-diametre, 184-metre long Diversion Tunel with a central gate chamber.

Power house

About 160-metre-long and 90-metre-wide Power House structure is located 30 metres below the river fed level. It is sheltered from the river flow and floods by a 40 metre high reinforced concrete wall around the structure.

The semi-underground power house has an installed capacity of 345 M.W. with 3 units of 115 M.W. each. The three turbines are fully utilising 138 cusecs of water and working under a head of 96 metres.

The installation of generating units in this case is remarkable as NHPC has for the first time undertaken erection of generating plant of such a big size and capacity indigenously.

Base workshop

To minimise time on account of failure or damage of original spares of heavy earth moving equipments which are not readily available, base workshop undertakes repair and manufacture of various spares for the equipment. Besides reducing the time, saving of about Rs. 25 lakh has been affected by manufacturing substitutes of imported equipment. The power generated at the Salal Project is being transmitted to the Northern grid through a network of five 220 K.V. transmission lines which are: Dasuya-Sarna, Sarna-Jammu, Sarna-Udhampur, Salal-Jammu and Salal-Udhampur.

Table

Power Generation by Salal Hydro Project

(in lakh unit)

Month	*Target*	*Actual*	*Unit I*	*II*	*III*
Nov. 87	—	725	492	370	208
Dec. 87	669	939	512	475	122
Jan 88	775	856	165	211	421
Feb 88	780	942	349	205	347
March (upto 20th)		1094			

	Transmission	
	Jammu	*Udhampur*
Jan. 88	395	453
Feb. 88	486	449
March 88	617	455
	1498	1357

The Salal Stage I project has been constructed at a cost of about Rs. 583 crore which includes some works relating to the Salal Project Stage II Project also.

Targets

On the completion of the second stage of the project the power-generating capacity will be doubled to 690 MW. For this a second tunnel parallel to the existing tunnel is required. This tunnel will be 2.6 km. long.

The power house for the second phase of the project is also coming up and the second phase will generate another 345 MW of power. All the 690 MW of power will be fed into the national power grid for supply to the different states in the northern region.

Benefits

With the addition of power from Salal Project, agricultural and industrial sectors will receive a boost in the northern region. This will not only help create additional employment potential, but will go a long way in the overall economic development of the region. Besides, a large part of the area along the river Chenab will turn green with the massive afforestation programme. □□□

Krishna-Godavari basin prospective for hydrocarbons

The Minister of State for Petroleum, Shri Rafique Alam, in his written replies to separate questions told Rajya Sabha recently that although the Krishna-Godavari offshore basin was still in exploration stage, it was emerging as prospective for hydrocarbons.

The Minister said that so far 29 wells on-shore and 35 wells off-shore had been drilled in the basin. Oil and gas had recently been discovered in wells GS-16-5 (off-shore) and Chintalapalli.

Shri Rafique Alam said that oil and gas flowed from GS-16-5, situated about 4.5 km. from coast, at the rate of 4982 barrels of oil per day and 1.6 lakhs cubic meters of gas per day.

The Chintalapalli well, situated about 2.5 km. from Razole town produced 6 lakh cubic meters of gas per day.

The Minister said that the discoveries were still in exploration stage and their potential for commercial exploitation would be known only after completion of exploration and delineation.

Shri Alam said that it was proposed to drill two exploratory well in Krishna-Godavari off-shore during 1988-89.

As on January 1, 1987, the geological reserves of hydrocarbons in Krishna-Godavari basin had been estimated at 31.57 million tonnes of oil and oil equivalent of gas □□

TV sets for rural primary schools

The Government had initiated a scheme under Education Technology during 1987-88 to supply one lakh TV sets and five lakh Radio-cum-Cassette Players to elementary schools during 1987-88, 1988-89 and 1989-90. The Central Government will bear 75 per cent cost of TV sets and 100 per cent cost of Radio-cum-Cassette Players under the scheme.

Thirteen States/Union Territories sent their proposals along with the list of elementary schools fulfilling the required conditions. Accordingly, 10, 049 TV sets and 37, 562 Radio-cum-Cassette Players were sanctioned in 1987-88. □□

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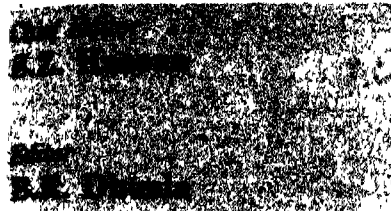
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Making Adult Education Programme a sucess

G.S. Sood

The author here points out that the Adult Education Programme has not achieved the desired results because of many hurdles. These, according to him, are lack of commitment on the part of the implementing agencies, lack of missionary zeal, inadequate social support, non-involvement of voluntary agencies and, to some extent, the fatalistic attitude of the illiterates. Therefore the author feels that this programme can become quite effective if it is linked with development schemes and the people are motivated to actively take part in it through judicious and extensive use of mass media.

AFTER 40 YEAR OF INDEPENDENCE, India finds itself in a paradoxical situation with significant amount of achievement in some of the key areas and equally important failures in others. On the one hand we have made rapid strides in the area of science and technology, on the other we have failed to inculcate scientific temper among our masses. Today, when we claim to have achieved a significant breakthrough in creating trained manpower to handle massive computerisation and high-technology needed for achieving growth at a faster pace and feel proud of moving towards the twenty first century, we fail to realize that we have not been able to find solution for many of our human and social problems, e.g. we have not been able to remove the age-old practice of sati and other social evils. At the same time we forget that ours is a country with more than 437 million illiterates (as per 1981 census). According to a recent World Bank Study, if the speed of eradicating illiteracy is not accelerated the country will account for more than half the illiterate population of the world and would therefore have the largest illiterate population in the world.

Despite the thrust on universalisation of primary education as also the adult education and tremendous increase in the number of educational institutions since independence, the number of illiterates has progressively increased although the percentage of literacy has improved (as shown in Table 1)

Table 1
No. of Literates/Illiterates in India

(in millions)

	1951	*1981*
Number of Illiterates .	300	437
Number of literates	60	247
Literacy percentage	16.67	36 23

Wide disparity

Besides, wide disparities are found in literacy rates of different regions, sex and communities (as shown in Table 2 and 3).

Table 2

Regional Disparity in Literacy

Literacy for all persons :	Kerala (70%)	Arunachal (Pradesh (21%)
Female literacy in rural . area	Kerala (65%)	Rajasthan (5 5%)

Table 3

Sex Disparity in Literacy

Literacy for all areas:	47% Males	25% Females
Literacy for rural areas:	41% Males	18% Females

It is painful to note that majority of our illiterates are women as rate of illiteracy among them is as high as 75 per cent. Not only this, wide disparities exist from one state to another regarding literacy rate of women which is as high as 65 per cent in rural Kerala and as low as 5.5 percent in rural Rajasthan. The states of Bihar, Madhya Pradesh and Uttar Pradesh which account for 38 per cent of rural families in India have rural female literacy rate of below 10 per cent. The literacy rate among Scheduled Castes and Scheduled Tribes is as

low as 21.38 percent and 16.35 percent. Looked at from the point of view of rural and urban areas, the literacy rate in urban India is almost double (with 57 percent) that of the rural India (with 30 per cent).

It is now being increasingly realized that because of illiteracy and ignorance, vast majority of our people have not been able to take advantage of the massive investment Government has made through various development programmes and schemes to raise the standard of living of people in this country. Consequently a fairly large segment of our population is still below the poverty line. It is therefore, being increasingly emphasized that unless people are made literate and aware of their disabilities, they would not be able to participate in the national development. Research all over the world has also proved that literacy drive is a powerful instrument of economic development and social change in a country.

Literacy accelerates development

There are several studies and experiences to show the manner in which literacy affects human resource development.

1. Increased participation of children in Primary Education:

Literate parents send their children to primary school more readily. Their children are less likely to drop-out and their achievement in school is generally higher than those of illiterate parents.

II. Low infant mortality rate (IMR):

According to data compiled by the Registrar General of Census Operations, infant and child mortality rate (IMR) in respect of illiterate mothers is much higher as shown in Table 4.

Table 4

IMR and Education of Women.

Education Level of Women	*Infant Mortality Rate Rural*	*Urban*
Illiterate	145	88
Literate but below Primary	101	57
Primary and above	71	47
Total Literate	90	50

III. Greater Success in Child Care and Immunisation:

Literate parents are more likely to accept immunisation of children. Programmes to promote breast-feeding, spread of oral rehydration therapy or introduction of children's growth monitoring are much more likely to succeed with literate mothers.

IV. Decline in Fertility Rate:

Acceptance of small family norm is related to the level of literacy.

Table 5

Percentage of couples practising Family Planning

Income. (Rs. per month)	*Illiterate*	*Literate (upto Primary level)*	*Above Primary Upto Secondary*
Below 200	12.4	23.6	30.0
201-500	7.2	26.9	48.1
500-1,000	22.4	44.0	61.5

V. Generates confidence and improves self-image

Through education people become aware of their social and legal rights, learn income generating skills and become active participants in the process of development and social change. Women acquire a better status and voice in the affairs of the family and community. Education helps to liberate them from the fetters of tradition and superstitions.

Adult education

Realizing the importance of education and to meet the challenge of illiteracy, the Government of India has been emphasizing the need for the Adult Education Programme (AEP). The importance of adult education has been recognised by the New Education Policy of the Government when it defines education as an instrument for liberation. It highlights the role adult education can play in continuous upgradation of skill so as to produce manpower resources of the kind and number required by the society. The Policy also realises the key role of adult education in solving the contemporary problems and issues facing the country as also in achieving national goals such as alleviation of poverty, national integration, environmental conservation, energisation of the cultural creativity of the people, observance of small family norms, promotion of women's equality, etc.

The Government intends to eradicate illiteracy from the country by 1990 by having the Adult Education Programmes implemented especially for the age group 15 to 35 The number of illiterates in this age group is estimated to be around 11 crores according to 1981 Census. Although the programme does not exclude others, the reason for focussing on this age group is that people in this age group are most productive and are prone to change. Also, looking to the disparities that exist in the literacy rates as discussed earlier, the efforts are particularly directed towards rural areas and even in the rural areas towards women, Scheduled Castes, Scheduled Tribes and other deprived sections.

Three dimensions

The Adult Education Programme is not merely a programme of eradicating illiteracy but it has three dimensions namely: literacy, awareness and functionality, as it is felt that no individual can improve his life by mere acquistition of literacy. He has to be made conscious of the causes and effects of his present situation. He must be made aware of the various programmes and schemes initiated by the Government for his benefit and his functionality has to be upgraded to enable him to take advantage of such schemes and programmes in order to improve his economic status.

Challenges

Eradication of adult illiteracy and the development of

a programmes of continuing adult education is a major thrust areas in the Seventh Plan and has been made an integral part of the minimum needs programme. It has also been included under Point 16 of the new 20-Point Programme. An outlay of Rs. 360 crore has been provided for it in the Seventh Plan. Despite all this, the programme has not picked up the pace it should have This fact had been realized in the Government of India's document on "Challenges of Education" in 1986. There are great many hurdles in the successful implementation of the programme for reasons discussed below:

1. The programme has somehow tended to become, with some exceptions, mainly a literacy programme as most of the adult education centres are least equipped to deal with other two basic components of AEP, namely, functionality and awareness. The adults find no incentive in going to these centres as they do not consider these programmes useful in the context of their environmental needs either immediately or in the long-run.

   The other reasons why adult illiterates do not come to the centres possibly include lack of motivation, time constraint, economic pressures, fatalistic attitude nurtured by centuries of enslavement and exploitation, lack of leisure, family resistence, absence of monetary and material incentives, irrational beliefs, geographical distance, negative attitude towards women's literacy, unawareness of the programme,etc.

2. Lack of commitment, interest and missionary zeal among key functionaries entrusted with the implementation of the programme pose a major challenge to the successful implementation of AEP. It must be emphasized here that for effective implementation of any development programme financial resources may be a pre-condition but is not a sufficient condition. It is the commitment to the programme that is of greater consequence. The recruitment practices of key functionaries generally ignore the qualities such as commitment, experience; competence and motivation laying an undue emphasis on paper qualifications and rigid procedures. Political interference, favouritism and corruption seem to be the order of the day in the recruitment of these functionaries.

3. The programme has not yet received adequate social support because of the threat it poses to some vested interests—socio-economic, political; as it may deprive them of the cheap labour or potential vote banks. Besides, even those who theoretically support the programme are found to be sceptical of its success. Therefore, veiled resistance and implicit indifference to the programme from a sizeable section of the community are a stumbling block in the way of popularization of the programme.

4. The programme's effectiveness is also impaired due to some practical difficulties such as:

—Absence of clear-cut policy.
— Over-emphasis on rules and regulations leading to redtapism and inefficiency.
— Voluntary agencies not receiving cooperation from State Governments and the procedures for their involvement being discouraging.
— Absence of coordination among various agencies implementing the programme.
— Lack of effective support from mass media.
—Inadequate resources at the disposal of implementing agencies especially the agencies working at the grassroots level such as adult education centres etc.
—Lack of material and equipment including relevant literature.
— Poor quality of training of functionaries.
— Misreporting and lack of credibility of monitoring system.
—Bleak and unsatisfactory environment in adult education centres including lack of basic amenities.
— Absence of proper evaluation as also the post-literacy and continuing education arrangements for neo-literates.
— Lack of political and administrative support of State Government and Panchayati Raj institutions in a sustained manner.

Suggestions

Realizing the role AEP can play in national development and looking to the pace with which it is progressing due to the abovementioned difficulties, a rethinking is required to be given to the programme at this stage In order to make the programme more effective, the following suggestions must be given a serious thought:

1. The identification of adult education with mere literacy has caused considerable setback to the programme in the country. For the programme to have real demand from the people, it must be linked with development programmes resulting in immediate economic benefit or skill development or employment. Though efforts have been made in the past to link adult education with development, these have met with only partial success Therefore, the approach should be to see how educational programmes can fit into the development programmes rather than expecting development programmes or personnel to help in adult education as is done presently. Literacy should come as a part of skill learning and need not be starting point. To achieve this, adult education must not be considered as an entity in itself. It is a subdivision and an integral part of a global scheme for lifelong education ad learning and must be perceived:

— in context with life long learning,
— be defined very broady,
— be related to the public policy particularly the development policy, and
— display a concern for positive action in favour of the educationally underprivileged. Hence, the recommendation of UNESCO on the development of adult education should be implemented in letter and spirit. It says "The term 'adult education'

denotes the entire body of organised educational processes, whatever the content, level and method, whether formal or otherwise, whether they prolong or replace initial education in schools, colleges and universities as well as in apprenticeship, whereby persons regarded as adults by the society to which they belong develop their abilities, enrich their knowledge, improve their technical or professional qualifications or turn them in a new direction and bring about changes in their attitude or behaviour in the two-fold perspective of full personal development and participation in balanced and independent social, economic and cultural development.

2. The programme should be transformed into a mass movement to create a sense of involvement among the people, generate environmental support and stimulate learners. For this all kinds of organised groups be involved such as voluntary agencies, panchayats and other panchayati raj institutions working at grassroots level, cooperative societies, universities/colleges and other organisations. In order to ensure that programme does not get frequently derogated by uninformed criticism, leaders of all political parties should be taken into confidence and brought into national consensus in its favour. This would also help in achieving cooperation and active participation of the cadres of different political parties.

Use of both traditional and mass media be properly harnessed at the field level. The modern mass media like radio, TV, cinema are powerful instruments for creating a suitable climate in favour of adult education programme; on the other hand, the traditional media like Bhajan, Kathavachan, Kathputli, Nautanki and Garba are effective in motivating adults to participate in adult education centres and should be extensively used for adult education work.

3 An effective motivational strategy is a precondition for the success of the adult education programme. For this, permanent community education centres equipped with necessary facilities and proper learning environment be established where illiterates, semi-literates and literates should have an equal opportunity for getting education. With limited resources, it is desirable to use existing institutions such as village/urban schools etc. for successful running of the programme. Syllabus for adults should be formulated in such a way that it in itself becomes a motivating factor. For example, to teach the learners to put their signatures.

The programmes should be attractive and relevant and have variety in teaching/learning materials. The literature should be relevant to the situation and should be prepared after rigorous survey of the needs and interaction of adult learners. Available local resources and culture of the respective communities should be integrated with the AEP. Hence, festivals, marriage, recreation, occupation, customs and practices, and the experience of the people as a whole will acquire a new meaning and will be assimilated into the movement with the promotion of A.E.P.

The Programme to be made cadre based needs proper training and motivation of instructors. It is important as he is the weakest link between the administrative set-up and vast mass of people. The universities should recognise adult education as a discipline because AEP requires persons who must have the qualities of leadership and the ability and knowledge of a teacher. Effective steps be taken to link extension with curriculum and award academic credit to both students and teachers taking part in extension work. Participation in AEP should be a recognised form of extension.

4. Lastly, the area of research in the field of adult education has so far remained neglected. The research in the areas of adult learning, psycho-socio-cultural characteristics of adult learners, motivational factors, learning principles, group interaction analysis, level of participation among the people etc. would prove to be very valuable. Such studies would enable the functionaries discover the limitations and factors that block the development of the individual and reorient the programmes towards better realization of the goals. □□□

Setting up of district informatics centres

The Minister of State in the Ministry of Planning, Shri B.S. Engti, stated in the Rajya Sabha during its last session that the National Informatics Centre under the Planning Commission was opening District Informatics Centres in all the districts of India in a phased manner. NIC was installing a computer and earth station in each district for this purpose. He said that each district will have one District Informatics Officer and one District Informatics Assistant. □

Coal and energy directorate for environment appraisal

A proposal to set up a Coal and Energy Directorate in the Ministry of Environment and Forests is under consideration in order to ensure that the Environmental Managements Plans (EMPs) were formulated in a satisfactory manner.

The proposed Directorate is intended to provide guidance to the Project authorities and to strengthen the Impact Assessment capability. □

Following up of adult literacy schemes

Chitra Sekhar

Post-literacy and follow up programmes play a great role in the success of Adult Literacy Schemes. These programmes help the neo-literates keep up interest and share knowledge and experience with others. The post-literacy and follow-up programme introduced by the Government in 1982 was the consequence of this understanding. Involvement of teachers, students, youth, voluntary agencies, employers, political parties and the media could bring better results, the author feels.

A COMMONLY RAISED POINT TO ACCOUNT for the gap between Government's developmental schemes and benefits on the ground is the poor level of awareness among the target group, lack of timely information and concomitant poor participatory effort. Literacy level in the country even after four decades does not make us feel proud. The figures available also must not be taken as a very thorough assessment as in surveys of this type there is bound to be a certain amount of fluidity. Even granting that this percentage can read elementary information, write it and do simple sums, the percentage of population covered by now is not enough at all.

More than the coverage for the three 'R' what is required is a life-long process of follow up enthusiasm among the adult learners combined with a most uninhibited and effective interchange of ideas and experience among learners and the others which somehow remain outside the pale of adult and functional literacy centres for one reason or other.

Adult education

It is common experience that in many centres, ten month adult education classes may take place and be in full swing, but the idea of continuing interest, application and sharing of knowledge and experience somehow are all left out of the practice of adult learning. This is an area where correct steps are to be taken. This is felt more prominently in the case of centres exclusively for women.

Other than teaching the alphabet and elementary arithmetic a wide range of topics have to be covered by the adult education centres. This will help not only in attracting learners in the 18-35 age group and sustaining their interest throughout the period of the class, i.e.,ten months, but also in making the learners more efficient and self-confident in their day to day life and their occupation. Be it farm labour, small self-employment or craftmanship, in addition to the prescribed curriculum for the adult classes the organisers at all levels and the teachers will do well to think of innovative method that will generate interest and involvement to a larger extent. The whole idea of adult education will serve no purpose if those who gain knowledge through these centres themselves become islands in the community. What is expected of them is that each one of them should initiate a process of adult learning even if it is strictly form bound, following a syllabus and confine to a particular centre. They can, through their own activities and mingling with their brethren become teachers. Only then the programme will become really meaningful.

Students contribution

Government has also realised this point and therefore is now giving more and more attention on areas like work and voluntary agencies and involve students from Universities and Colleges. Students are expected to contribute towards propagation, conduct and evaluation of adult education either through National Service Scheme or outside the periphery of NSS. It is even envisaged that the libraries and reading rooms in the University Campus and the bigger schools and other educational institutions can be made accessible to the adult learners. These places can even become the very centres of continuing activity in the particular village and adjoining areas.

The UGC has a scheme for providing financial assistance to students in this activity through more than 90 Universities and some 2000 colleges.

The post-literacy and follow up programme was introduced by Government in 1982 with the objective of ensuring that neo-literates do not relapse into illiteracy

(Contd. on Page 34)

PM's call to eradicate illiteracy

National Literacy Mission Launched

Yojana Correspondent

CONCERTED EFFORTS OF ALL WALKS OF society and participation of various voluntary agencies, educational institutions, trade unions, etc only can help wipe out illiteracy in our country—this was emphasized by the Prime Minister Shri Rajiv Gandhi on the occasion of launching of National Literacy Mission (NLM) in New Delhi on May 5, 1988.

In his address, Shri Gandhi said that various programmes launched by Government after Independence to eradicate illiteracy could not yield the desired results due to lack of firm political and administrative support and absence of proper post-literacy and continuing educational arrangements. He said that efforts should be made to channelise the technology in the allround development and improvement in the quality of people's lives.

Earlier, Shri P.V. Narsimha Rao, Minister for Human Resource Development, inaugurated an exhibition on the theme: 'National Literacy Mission: Literacy for Development', coinciding with the launching of the mass campaign for National Literacy Mission. A two-week exhibition highlighted success stories on adult education including experiences of university students and volunteers and key aspects of intensification of action for eradication of illiteracy.

Along with NLM a Mass Programme of Functional Literacy is also to be set in motion in which nearly a million student volunteers apart from NCC, National Service Scheme, Nehru Yuvak Kendras, Bharat Scouts and Guides will participate. Free literacy kits would be provided to student volunteers. A training programme would also be launched for training 10,000 youth activists for this Mission.

Objective of NLM

The "National Literacy Mission" is aimed at mobilisation, involvement and support of all sections of the society irrespective of political affiliations. Trade unions, employers, voluntary agencies, youths, women, members of armed forces, and others will also be intimately involved in this Mission. The objective of NLM is to bring a qualitative change in the life and environment of millions of people especially in the age group between 15-35 years. The focus of this Societal Mission will be on rural areas, dropout students, women and the weaker sections of the society. Literacy being an important tool of communication and a vital source of human resource development, the NLM will ultimately help in the overall development of the country.

Dimension of challenge

This mass programme for literacy is designed to meet the challenge of growing number of illiterates despite the thrust on universalisation of primary education and the adult education in the past. There have been instances when lack of literacy compounded with social economic backwardness had prevented many people from taking full advantage of financial assistance for self-help projects. With the increasing accent on programmes for rural development and people's participation the NLM has, therefore, been prepared as part of the five National Technology Missions for the betterment of living and working conditions of the people particularly in rural and backward areas.

Under NLM all out efforts will be made to impart functional literacy to 80 million persons in 15-35 age group—30 million by 1990 and another 50 million by 1995. These persons will also acquire skills to improve and imbibe values like national integration/unity, women's equality, environment conservation and small family norm.

Continuing education

A new concept in continuing education under NLM is that of "Jana Shiksha Nilayams." One Nilayam will be for four or five villages with a population of about 5,000. The Nilayams will have evening classes, library and reading room as also discussion groups, sports and adventurous activities, cultural programmes and a communication centre with radio, TV and VCR.

Functional and simple training programme in a variety of topics will be given and a single-window system for information on developmental programmes will be arranged.

Employers, trade unions, universities, colleges and polytechnics will also be providing extension facilities. Apart from this book promotion programmes will be taken up on a big scale. Libraries and reading rooms in educational institutions would be opened to the public in the evenings.

Modernisation in teaching

Under NLM, facilities will be provided for improved aids in teaching and learning. These include new type of slates, globes, maps and charts and medals as also use of radios and cassettes, slides and film strips, The existing techniques of rapid learning will be surveyed and improvements brought in the field of post-literacy and continuing education. Computers will be used in the management of the Mission Programmes, for project planning, creating a data base, data analysis and decision-making and also for inventory control.

Adult education centres

The 'Adult Education Centres' under NLM will be the operational units at village or mohalla level. Eight to ten centres will have a supervisor called 'Prerak' from the local area. He will also organise post-literacy programmes through Jana Shiksha Nilayam, At the district level, the District Board of Education (DBE) will be responsible for overall planning and administration. The District Resources Unit (DRU) will provide technical resources. DBE will decide allocation of responsibility among various agencies and overall guidance to District Resources Units and coordination of programmes among various agencies. DRU will provide technical assistance and train functionaries at the district level and prepare material for basic and post-literacy programmes. They will also mobilise media support and do evaluation.

Technological demonstration

Forty districts in the country have been selected for technology demonstration and arrangements are also being made for securing collaboration with scientific and technological institutions in the country to provide techno-pedagogic inputs for the literacy endeavour. The idea is to try out new methods and new technological inputs in these 40 districts in the first instance before their replication to other districts. It is one of the greatest creative endeavour in the adult education field in this country and is expected to provide the much-needed functionality support to the programme.

Shramik Vidyapeeths

The network of Shramik Vidyapeeths (SVP) in the country will now function as catalysts to stimulate and involve the employers, trade unions and labour welfare centres to take up implementation of functional literacy programmes as well as conduct educational programmes relevant to meet the needs of workers and their families, Wherever necessary the SVPs will seek cooperation of like-minded agencies. During 1987-88 alone, the SVPs offered need-oriented courses covering nearly 90,797 beneficiaries upto December 1987.

Training Institutes

Training institution will be identified in areas like voluntary agencies, universities, trade unions, Nehru Yuvak Kendras, and social and labour research institutes. Each organisation is to select and impart training of three weeks to 50 to 75 persons each year. the trainees will be youth committed to social development, ex-servicemen, panchayat members and other dedicated persons, with women forming at least one-third of the group. Of the trained persons, 2,000 to 2,500 will do whole time or part-time work as NSS volunteers, the literacy inspectors and activists in education. The number of voluntary agencies is expected to go up from 300 in 1987-88 to 1000 in 1989-90. These will be indentified through State Governments, Social Welfare Boards, Khadi & Village Industries Commission, Social and Research Centres like the ones at Tilonia in Rajasthan and Uttarakhand Sewa Nidhi, Almora.

Mass media for motivation

Mass media can do a lot for involvement of people in NLM in a big way. Village Education Committee and 'Jathas' or cultural caravans, students, teachers and artists are to tour villages and towns making the people aware of their rights and the importance of literacy. Special films will also be produced for the benefit of the deprived section of the socisty.

Financial estimates

The estimated expenditure on NLM upto 1990 is expected to be Rs. 550 crore. Out of this Rs. 340 crore will be borne by the Centre and Rs. 210 crore by the States. At the Centre, a National Authority on Adult Education headed by the Union Minister for Human Resource Development will be set up, and similar bedies will be formed at State level. □□□

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Rehabilitation of offenders

A Centrally sponsored Scheme on Prevention and Control of Juvenile Maladjustment was formulated and introduced. in 1987-88. The Ministry of Welfare was requested to take in the first instance a stock of existing infrastructure in the various States/UTs with the help of National Institute of Social Defence (NISD). The proposal for strengthening the organisation of NISD was also taken up. Another scheme of welfare of Prisoners was formulated/finalised for reinforcing the welfare content of prison programme viz. the reformation and rehabilitation of offenders, in keeping with the declared objective of prisons. □

Vocationalisation of Education

K.K. Khullar

Vocationalisation of education has been advocated by various educational commissions prior to and after independence. Unfortunately the progress has been tardy. Even in areas where the scheme has been given a trial, the implementation has not been uniform and satisfactory. The proposed centrally sponsored scheme of vocationalisation drawn up in consultation with the State Governments, it is hoped, will give the necessary fillip to this scheme.

VOCATIONALISATION IS ONE OF the thrust areas in the National Policy on Education—1986 (Extracts from the policy documents are annexed.) It is proposed that vocational courses should cover 10% of higher secondary students by 1990 and 25% by 1995. The introduction of non-literary vocational education at secondary school stage dated back to the Wood's Despatch (1854) in the days of Lord Dalhousie. The Hunter Education Commission (1882) appointed by Lord Ripon made a specific recommendation regarding the diversification of courses at secondary level. The Hartog Committee Report (1929) as well as the Sapru Enquiry Committee Report (1934) recommended diversification of courses at the end of Class VIII and Class XI respectively. None of the above recommendations was implemented. The Abbot Wood Advisory Committee Report (1936), however, resulted in the setting up of several Polytechnics in the country. The Sargent Report on Post-war Educational Development (1944) was the last pre-Independence Report to recommend Vocationalisation in the school system. But all the recommendations remained on paper.

In the post-Independence period Dr. Radhakrishnan Education Commission Report (1948) recommended vocationalisation in the Intermediate courses. The Mudaliar Secondary Education Commission (1952) made recommendations as a result of which Multi-purpose schools were set up in the country. The Kothari Education Commission (1964-66) Report made very significant recommendations. It gave a high priority to vocational education at VIII plus and X plus in full fledged vocational institutions. In addition, the Commission recommended vocationalisation of higher secondary education at X plus. The National policy on Education (1968) laid down:

> "There is need to increase facilities for technical and vocational education at this stage. Provision of facilities for secondary and vocational education should conform broadly to requirements of the developing economy and real employment opportunities. Such linkage is necessary to make technical and vocational education at the secondary stage effectively terminal. Facilities for technical and vocational education should be suitably diversified to cover a large number of fields such as agriculture, industry, trade and commerce, medicine and public health, home management, arts and crafts, secretarial training etc."

The Gandhian view

Vocational education can be defined as education which is aimed at preparing skilled personnel at lower levels of qualifications for one or more groups of occupation, trades or jobs. The concept of vocationalisation fascinated Gandhiji so much that he had made it an integral part to his idea of Basic Education. His 'Nai Talim Sangh, which he established in 1936 conceived education as an independent stream with training to prepare students for identified occupations. The New System of education conceived by Mahatama Gandhi was revolutionary in concept and highly original in scope. It was based on the theory that it was the activity of the 'thinking hand' which had, more than anything else, guided the evolution of man and society and, therefore, the whole education of man can be imparted through the medium of a basic handicraft. The goal of Basic Education, according to Gandhiji, was to build up a non-voilent, non-exploiting social order in which alone the ideals of freedom, equality and brotherhood can be fully and universally realised. At the core of it was the principle of non-voilence. Gandhiji described it as an 'all-in-complex' of all the activities included in his programme of reconstruction, linking education with national development, particularly the middle-level manpower.

Gandhiji's New Education has the following ingredients:

(i) It will be able to pave its way;
(ii) It will enable the students to provide themselves through their own effort, means for a healthy, decent cultured existence;
(iii) Train out not only their intellect but also their physical and spiritual faculties.

Gandhiji was convinced that what men do with their hands, in order to live, conditions their thinking and behaviour and their entire outlook, more than what they are taught by the word of mouth. By co-relating the teaching and practice of a socially useful manual craft with the why and wherefore of it, not only the intellectual but also the physical and spiritual faculties are fully developed.

His basic school

His basic school, was therefore, to be not an idyllic spot far removed from the problems of every day life facing the child but a laboratory, where the children would be taught to find and test solutions of the problems in individual and community living, facing them and their villages in a non-voilent and a democratic way, so that the experience of learning through doing is fully realised. Spinning and weaving were very dear to Ghandiji because of its universality, interrelation with prime human need and little expense. He wanted that the entire expenses of the school's contingencies should be met out of the earning of weaving and spinning.

Post-basic education concept

After the Basic Education he gave a design of Post-Basic Education. "We must penetrate the homes of the children. We must include education for every body at every stage of life." A Basic School Teacher, therefore, was a universal teacher. The Women Basic Teachers went to the expecting mothers in the villages and taught them to ensure the health of their unborn babies and their own health. He also laid emphasis on adult education. "Adult Education of my conception", said Gandhiji "must make men and women better citizens all round. Agriculture will play an important part in adult education under the Basic Scheme. Literacy instruction must be there. Much information will be given orally. There will be books more for the teachers than for the taught. We must teach the majority how to behave towards the minority and vice versa. The right type of education should cut the very root of untouchability and communalism"

Scope/context

Traditionally 'vocational education' has been understood as education designed to prepare skilled personnel at lower levels of qualification for one or more groups of occupations, trades or jobs. Vocational Education has been usually provided at upper secondary level and includes (i) general education; (ii) practical training for the development of skills required for the occupation and (iii) related theory. The proportion of these components may vary considerably but the emphasis is usually on practical training.

Some complexities of basic education system made its acceptance difficult in the context of fast changing socio-economic conditions which arose after achieving independence in 1947. Education Commission (1966), recommended introduction of work experience to combine education with work in schools. National Policy on Education (1968) recommended work experience as laid down under "Work experience and National Service". The school and the community should be brought closer through suitable programmes of mutual service and support. Work-experience and national service including participation in meaningful and challenging programmes of community service and national reconstruction should accordingly become an integral part of education. Emphasis in these programmes should be on self-help, character formation and developing a sense of social commitment " It has, however, not acquired the desired place in school curriculum though some States made some headway

The Ishwarbhai Patel Committee (1977) came forward with the concept of socially useful productive work (SUPW) as an integral part of education envisaging purposive, meaningful manual work, resulting in either goods or services useful to the community. The Committee recommended 20% of the total instructional time to be devoted to the SUPW activities which should be selected in accordance with the specific needs and conditions of the locality, availability of infrastructural facilities and expertise available with the institutions and the community. Although the recommendations of the Ishwarbhai Committee were accepted by most of the States and UTs, the programme has not made adequate progress because of lack of support from the community and several other factors.

The 10 + 2 stage

Introduction of vocational courses at the secondary stage has been made by several States, notable amongst them are Tamil Nadu and Maharashtra. Although the vocational education at +2 stage was recommended by Kothari Commission and included in the Policy Resolution (1968), the progress in this regard has been poor, partly because it required the States first to switch over to 10+2 pattern which took time and also because of paucity of resources available to them Vocational education in respect of technical education would be relatively costlier than general education and due to the overall constraints of resources, funds have not been made available for vocational education to implement this programme at +2 stage. There was a central scheme involving an outlay of Rs 2 crores in the 5th Plan providing for central assistance but the NDC transferred this scheme to State Sector along with many other central schemes. Without central financial involvement this new concept has not made substantial progress. The coordination arrangements with other sectors, notably the industry, have also not materialised. States have adopted different models for vocational education which have not yielded desired results Vocationalisation at the higher secondary stage of education is important because it marks the terminal

stage of formal schooling for nearly half of those students who join it. In absolute terms, the number may come out to be about one million each year. It is also important because it provided the bridge between general education of secondary stage and higher education in arts, science and commerce courses and professional institutions.

Diversification has been recommended at this stage to channelise a considerable proportion of student population into programmes of education of practical utility in various fields suiting to the interests, aptitudes, ability of children so that on the one hand they are able to go into professions best suited to their talent and ability and do not necessarily opt for going into higher education which has become too unwieldy. Vocationalisation of education is also a national requirement for the effective correction in the supply system of manpower to keep pace with the plan developmental activities.

By the end of the 6th Plan, vocationalisation of higher secondary education programme has been taken up in 10 States and 6 UTs viz. Andhra Pradesh, Assam, MP, Gujarat, Haryana, Karnataka, Kerala, Maharashtra, Tamil Nadu, West Bengal, Delhi, Pondicherry, Arunachal Pradesh, Chandigarh, Mizoram and Andaman & Nicobar Islands. The current intake is of an order of 72,000 in more than 1,500 institutions, only 2 5% of the students entering +2 stage are covered by vocationalisation and curricula developed by the States which have implemented the vocationalisation at +2 stage,is, however, not uniform and allocation of time for vocational subjects varies from 50% of the total instruction time in case of Maharashtra to 17% in case of Pondicherry, languages between 16% to 25% and the remaining time for other subjects The time allocation by States except Maharashtra is within the recommended limits of NCERT. Except for Karnataka and Haryana, in all other States the course content of the related subjects is the same as for general academic courses. With such course content, it is likely that vocational students may not strengthen the basic knowledge about the subjects which they need for their vocational course.The States have introduced a large number of vocational course depending upon availability of resources and usefulness in terms of local requirements. Andhra Pradesh has introduced 22 courses, Gujarat 15, Karnataka 37, Maharashtra 35, Tamil Nadu 49, West Bengal 4, Delhi 11 and Pondicherry 15 courses. These courses include Blacksmith, Welder, Sheet Metal Worker, Moulder, Carpenter, Mechanic, Mechanic (Diesel), Upholstery, Plumber, Painter, Wireman, Farm Mechanic, Building Constructor, Pattern Maker, Mechanic (Motor Vehicle), Fitter, Turner, Machinist (Grinder) Machinist Mill Wright Maintenance, Electrician, Instrument, Mechanic, Refrigeration & Air Conditioning Mechanic, Tool and Die maker, Electroplater, Draughtsman (Civil), Draughtsman (Mechanic), Watch & Clock Mechanic Surveyor, Mechanic (Radio and Television), Mechanic (General Electronics), Wireless Operator, Bleaching, Dying, and Calico Printing, Book Binding, Cane,Willow and Bamboo work, Cutting and Tailoring, Embroidery & Needle Work, Weaving of silk & Woolen fabrics, Weaving of Fancy and Furnishing Fabrics, Hand Weaving of Niwar, Tape, Durries and Carpets, Weaving of Woolen fabrics, Knitting with Machine, Manufacturing of Household Utensils, Manufacturer of Footwear, Manufacturer of sports goods, Manufacturer of sports goods (Leather), Manufacturer of sports goods (Wooden) Manufacturer of suit cases and other leather goods, Preservation of fruits and Vegetables, Printing Machine Operator, Hand composition & Proof reading, Stenography (English), Secretarial practice, Dress Making, Hair Dresser (Gents), Hair and skin care, Laundary man, Stenography (Hindi). In Tamil Nadu there is a vocational course of training of temple priests. There is also a course in Hair-cutting and Beauty Culture.

A centrally sponsored scheme of vocationisation has been drawn up in consultation with the States Governments and is under finalisation and shall soon be introduced wherby State Governments will receive grants to set up vocational programmes for various target groups, stengthening, of various infrastructure at various levels, apprenticeship training for students of vocational courses, revision of recruitment rules/employment policy.

Extracts from National Policy on Education-1986.

5.16 The introduction of systematic, well planned and rigorously implemented programmes of Vocatioal Education is crucial in the proposed educational reorganisation. These elements are meant to enhance individual employability, to reduce the mis-match between the demand and supply of skilled manpower, and to provide an alternative for those pursuing higher education without particular interest or purpose.

5.17 Vocational education will be a distinct stream, intended to prepare student for identified occupations spanning several areas of activity. These courses will ordinarily be provided after the secondary stage, but keeping the scheme flexible, they may also be made available after Class VIII. In the interests of integrating vocational education better with their facilities the Industrial Training Institutes will also conform to the larger vocational pattern.

5.18 Health planning and health service management should optimally interlock with the education and training of appropriate categories of health education at the primary and middle levels will ensure the commitment of the individual to family and community health, and lead to health related vocational courses at the +2 stage of higher seconary education. Efforts will be made to devise similar vocational courses based on Agriculture, Marketing, Social Services, etc. An emphasis in vocational education will also be on development of attitudes, knowledge, and skills for entrepreneurship ans self-employment.

5.19 The establishment of vocational courses or institutions will be the responsibility of the Government as well as employers in the public and private sectors; the

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Popularising vocationalisation programme

S. Rajagopalan

Under the New Education Policy, 500 vocational courses are proposed to be started in all the States keeping in view their local needs and job-potentials. NCERT has so far designated 59 such courses. The author here feels that if the programme of vocationalisation is to catch on, the Government will have to ensure gainful employement for those passing out of the vocational streams in schools. For this, sooner recruitment rules are amended to give due weightage to the vocational students, the better it will be for popularising the vocationalisation programme.

ONE OF THE IMPORTANT THRUST AREAS of the New Education Policy is to vocationalise school education at the higher secondary level by introducing job-oriented courses in a big way. The policy document speaks of diverting 10 per cent of the higher secondary students to the vocational stream by 1990 and 25 per cent by 1995. This is a daunting task indeed, considering the absolute numbers involved under this prescription as well as the specialised infrastructure that needs to be created to get the programme going.

A welcome step

It is in this context that one should welcome the Human Resource Development Ministry's move to operationalise a Centrally-sponsored scheme to cover 5,000 schools by 1990 under the vocationalisation effort. More than anything else, this step would give the much-needed initial start to a programme which has had to rest content with lip sympathy for the past several years. The vocationalisation programme was to have started last year itself, but owing to the enormous preparatory work involved in it, the programme got deferred by a year. The Centre has since sanctioned assistance to the tune of Rs. 32 crore to 16 States and Union Territories to start vocational courses. These are expected to get under way in the coming academic year.

The scheme of vocationalisation, approved by the Union Cabinet last October, encompasses an elaborate management set-up, curriculum development and teachers' training plan and some policy measures to provide for apprenticeship stipend and weightage in recruitments to vocational students.

Joint Council

The Human Resource Development Ministry will be setting up soon Joint Council for Vocational Education, which will be an apex body to plan and coordinate the development of vocational education at the national level. In addition, a Bureau of Vocational Education will form part of the Ministry. The State Governments have been asked to set up similar bodies, all of which will be affiliated to the Joint Council.

The courses

In all 500 vocational courses are proposed to be started in the different States, keeping in view their local needs and job-potentials. The National Council of Educational Research and Training (NCERT) has so far designed 59 such courses. In the beginning, three or four vocational courses will be started in each higher secondary school. The students will get subsidised textbooks. The NCERT will coordinate the training programme for vocational teachers.

And the employment

All this is very well. But if vocationalisation is to catch on, the Government will have to ensure that the students passing out of the vocational streams in schools are gainfully employed. They should readily get jobs in the trained skills or should get sufficient encouragement for self-employment. The failure on this score was one of the key factors why the vocationalisation idea did not click in the past. Official sources say the Government is indeed contemplating changes in recruitment rules so as to give due weightage to vocational students in placements. The sooner this is finalised, the better it will be for popularising the vocationalisation programme.

Vocationalisation of school education in India has had a chequered course. The concept itself is very old, but it was never promoted in a purposeful fashion. The first ideas on vocationalisation were set out in the report of the Wood's Despatch. That was in 1854. Since then,

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Pre-school education in India-a study

H.L. Harit

The article provides an authentic insight into the origin, development and present status of pre-school education in India. Having realised the importance of pre-school education for the socio-emotional and cognitive development of the child, the Central and State Governments, have given due attention to it. The New National Education Policy (1986) also gives a great deal of importance to early childhood care and education. Yet, the author feels, pre-school educational activities are not up to the desired standard. He, therefore, pleads for revitalisation and constant review of I.C.D.S. and puts forth some positive suggestions in this regard.

EDUCATION IS AN ESSENTIAL INPUT for human resource development.Although there has been massive quantitative expansion in education all along since Independence, about 63 per cent of the population in India are deprived of any level of education. Despite all best efforts of Government, both at Central as well as State, enrolment at the primary stage could reach 91 per cent of the children in the age-group 6-11 years by the end of the Sixth Five year Plan. Enrolment ratio among girls is even more low (i.e. only 69 per cent). There are very high incidences of drop-outs and stagnation. It is reported that out of 100 children who step in the first standard, only 40 students come out successfully after passing 5th standard; and many of them stagnate at some or the other stage in the primary education for a couple of years. Some of the studies have revealed that in majority of the cases children who do not attend primary classes, do not find school attractive enough because of several reasons, one of them being that there is no continuity in the home environment and school environment with the result that the children run away from the school. Another revelation is that children of the socially and economically backward do not fare well in their studies as they suffer from the impact of deprivation in their early childhood.

pre-school education

In the development of the child's intellect, the first three years of its life are very crucial, This is the period when the physiology of the human brain reflects accelerated growth. Fifty per cent of the total growth of human intelligence takes place before the age of four years when for all practical purposes, the development of intelligence is complete. This implies that half of a child's growth in intelligence takes place before he goes to school.

Well Known Psycho-analysts (like Maria Montessori 1927), Jean Piaget (1951), Hunt (961), and Bengamin Bloom (1964) have advocated that a child has a natural urge to acquire knowledge and understand his physical surroundings. They viewed child as cognitively active and inventive who interacts with objects and people; and much of the child performance is shaped by the quality of his interaction with the environment. Studies on child rearing patterns of different socio-economic groups undertaken by Bernstein, Similanski,Hess and Shipman have shown that children from disadvantaged homes are not quite as well equipeed in cognition, verbal and attentional skill as compared with their relatively well-off counterparts at the time of school entrance. All these studies advocate appropriate compensatory educational programmes to help such children acquire necessary skill for learning and adjusting in school. During pre-school years a wide array of experience and an opportunity to intellectually sort out and integrate these experiences are vital sources of stimulation to the rapidly evolving brain.

The educational forces impinging upon the pre-school child emanate broadly from three sources i.e. the home, the community and the pre-school environment. Children from disadvantaged homes do not experience as many situations necessitating cognitive operation as elite children do. The findings of a study revealed that regular attendance in the nursery school made significant difference in the intellectual development of children from high stimulation homes and in the social and language growth of children from low stimulation homes. Majority of the children in India do not receive

the required stimulaltion at home due to acute problems of poverty and illiteracy. Their parents are not able to contribute much to the child's socio-emotional or cognitive development and thereby, consequences of deprivation during early childhood are great in terms of good model of language usage; opportunities for experiences; encouragement of problem solving and independent thinking and parental expectations and motivation for intellectual growth. These children go to the primary school at the age of five/six years without having any kind of preparation of schooling. Poor in their vocabulary and with their concept ill-informed, they are not ready to cope with symbolic abstraction. They find no meaning and subsequently lose interest in the whole process of learning If we wish that our children in the country should do well in their later life, stress should be laid on pre-schools to provide stimulation and compensatory education. Environmental stimulation through pre-school education can give children a better start in life and a chance of higher achievements in later life.

In societies where joint families exist, the young child is taken care of by the family as a whole. The child imitates the behaviour of other family members and takes part in various tasks in the day-to-day life. The older members of the family play an important role in stimulating the child and initiating him into life. With urbanisation and industrialisation, the joint family is tending to disappear and giving way to nuclear families composed of parents and children. A large number of women have taken up work outside the home out of economic necessity for supplementing the family income. Under these conditions, it thus becomes greater responsibility of the state to care and protect these children and off-set any deprivation in their environment.

In societies all over the world, formal education of a child starts with primary education and it has been found that children in majority cases, are not willing to go to a primary school due to several reasons. One main reason is that the child is completely accustomed and conditioned to the home environment, and reacts sharply to a kind of alien environment. He should therefore be gradually introduced to the new environment which is present in the primary shcool. The pre-school serves to condition the child gradually and slowly to the emergence of a new atmosphere and set of conditions in which there will be need for disciplined conduct, adjustment to the presence of a teacher, to the society of other children of his own age, and the interest being created in the requirements of learning various subjects which are a part of the curriculum in th primary school.

Thus, the greatest importance of pre-schools lie in the preparation of the child for entire formal education that follows after 6 years. During this short period of 3 or 4 years, the child acquires great many things that last for the whole life. Briefly these are:—

Firstly, he uses his senses, the use of which he has already learnt in the first two years of life, to know, observe minutely and discern the slightest differences of things around him and thus gets himself thoroughly acquainted with the world around him. His curiosity is roused to the highest and he is engaged in finding out the way, where and how, in short, everything about whatever forms part of his environment.

Secondly, the child feels enormous energy in his body and so he is overwhelmingly eager to use his limbs and body. Thus any bodily activity is attractive-running, jumping, climbing, rolling on the ground, turning somersaults, in fact, any and every bodily activity.

Thirdly, he is interested in acquiring skill of the figures and learing to do each and everything that he sees his mother, father and others are doing. He also likes to do his own things and get rid of dependence on elders for every small thing.

Fourthly, he has a very big task before him at this age-namely that of learing the language that is spoken around him. This is a very intricate and difficult mental process in which some abstract thinking is required A good foundation is to be laid regarding this use of language in social intercourse.

Fifthly, the child has to learn to be a school being. So far he is somewhat individualistic, and people around him in his family give him all sorts of concessions to learn to mix with other children of his age, respect their rights, form friendship, learn the benefits of cooperation, and so on In short, he learns social adjustments and ceases to be a misfit amongst other children

Lastly the child at this age has a great urge to express himself, his emotions and knowledge of things Language is very undeveloped for satisfactory emotional outburst; hence he needs other vehicles of expression like picture,drawing, clay modelling etc.

Pre-school in India

Pre-school education came into existence about fifty years ago in India. Prior to 1947, provision of pre-school education was entirely in the private sector. Governments concern for pre-school education became apparent for the first time in 1944, with the publication of the Sargent Committee's Report on 'Post War Educational Development in India'. The report pointed out that the "state should provide for pre-primary education and popularise it." It recommended nationalisation of pre-primary education. This recommendation, however, was not acted upon. In 1964, the Kothari Education Commission stressed the need to undertake pre-school programmes for socio-emotional and cognitive development of the child through voluntary sector, in an effort to provide equal opportunities for all. The Commission recommended that private enterprise should be made responsible for setting up and runing pre-school centres, while the state should provide assistance through grant-in-aid. It also recommended maintenance of development centres for supervision and guidance, model school, training programmes, research and preparation of literature for the pre-school.

The Central Social Welfare Board (CSWB) which was set up in 1953 with the objective of giving assistance to voluntary social welfare organisations throughout the country, placed considerable emphasis on programmes for pre-school child. Since then the Board has been developing Balwadis under various programmes directly through grants to voluntary organisations.

The Central Advisory Board of Education also recognised the significance of pre-primary education and recommended the proposal to develop a programme for pre-primary schools by mobilising the community resources especially in the rural areas. In 1972, a Study Group on the Pre-School Child was set up which recommended setting up of a variety of models of pre-schools to suit local conditions and suggested that the community be involved fully in providing different categories of workers with training facilities.

The new National Policy on Education (1986) has given a great deal of importance to early childhood care and education (ECCE). It views ECCE as an important input in the strategy of human resource development (HRD), as feeeder and a strengthening factor for primary education and a support service for working women of the disadvantaged sections of society. It has taken into account the nature of ECCE and has pointed out the need for organising programmes for the all-round development of the child including nutrition, health, social, mental, physical, moral and emotional development. The importance of community involvement has also been highlighted. With this in view, ECCE will receive high priority and will suitably be integrated with ICDS.

Pre-school education in Plans

In the First Five Year Plan (1951-56) balwadis formed an important feature in the Community Development Programme and the scheme of Welfare Extension Projects (WEP) taken by the Central Social Welfare Board. Besides, the Ministry of Education offered financial assistance to various State Governments for starting pre-primary schools Nursery schools were provided under vorious legal enactments. In voluntary sector kindergarten schools and nursery schools were also started by some organisations

In the Second Five Year Plan (1956-61), pre-primary education received considerable attention. The Ministry of Education extended further its programme of pre-primary schools and the CSWB the programme of Balwadis through thier state branches. The voluntary organisations also continued organising nursery schools.

During the Third Five Year Plan (1961-66), stress was laid on providing the Balwadis in existence, with trained Child Welfare Workers (Bal Sevikas) and to meet their demand of Bal Sevikas, six training centres were set up. The setting up of Balwadis continued to be an important part of the programmes for children in Community Development Blocks and in WEPs.

In the Fourth Five Year Plan (1969-74), efforts were confined mainly to certain strategic areas such as training of techers, evolving suitable techning techniques, production of teaching materials and teachers' guides.

In the Fifth Five Year Plan (1975-79) it was envisaged to attach Children's Play Centres to selected primary schools and encourage private agencies to run pre-primary schools. Assistance continued to be provided in the areas of teachers' training, preparation of teacher guides and promotion of research for evolving methods for pre-school education suited to our conditions.

The pre-school programme in the Sixth Plan (1980-85) envisaged to have at least one Early Childhood Education Centre (ECEC) in every community development (ED) block and develop these centres as adjuncts to village primary schools, wherever possible. Stress in these centres was laid on the inculcation of sense perceptions among the children, through innovative use of locally available resources in the community and the environment Besides, coordination with the inputs of programmes under health, nutrition, social welfare, integrated rural development and education was also attempted. The National Council of Educational Research and Training (NCERT), in collaboration with similar agencies in the states helped in developing the learning materials and aids both for teachers' training and for programme implementation.

In the Seventh Five Year Plan (1985-90), early childhood education is proposed to be dovetailed with nutrition, health care and social welfare as a package within the broad framework of programme of Integrated Child Development Services (ICDS), so as to inculcate in the children "a healthy attitude to school-going, to help inorease their retention rate in schools."

No information is available with regard to actual status of pre-school education in India, the reason being that it is managed mainly by private institutions. In public sector, pre-school education has started gaining momentum only after Independence. The number of pre-primary schools which was 303 with an enrolment of 28000 in 1950-51 rose to 2,614 with an enrolment of 2,70,000 in 1967-68. In 1979-80, there were 10,426 centres with an enrolment of about 9 lakhs children under Education sector alone. It is however estimated that at present about 20 lakhs 3% (approx) of the children in the age-group 3-6 are being provided' facilities of pre-primary education.

Different models of pre-school education

Institutions imparting pre-school education go by several names in India. Some of them using the English language call them Kindergartens or Montessori Schools, while others include Balmandir, Balwadi, Poorva Prathmik Shala, Bal Shikan Shala, Bal Vikas Kendra, Bal pathshala, Bal Vikas Mandir, and Bal Vatika. In a large country like India, the use of more than one name cannot be prevented, but the name must

have defined implications. All institutions that deal with children between three to six years of age are pre-schools by whatever name they may be called. Based on such implications, the different categoris of institutions as exist today in India, may be classified as:

(i) Creches/Day Care Centres
(ii) Balwadis
(iii) Nursery Schools
(iv) Anganwadis

Creches/Day Care Centres

These centres provide day-care services for children. Services include health care, supplementary nutrition, sleeping facilities, immunisation, play and entertainment for the children. Such centres are being run by various agencies including Central as well as State Governments. The scheme, of Creches/Day Care Centres for children of working women being run by the Government of India, through Central Social Welfare Board, has a provision for a unit of 25 children; with two Ayas/Helpers employed to look after the children. In 1986-87, the scheme had a coverage of about 9000 Day-Care Centres benefitting about 2.25 lakh children.

There are some legal provisions for the care of children of working mothers. The Factories Act. 1948, the Mines Creche Rules, 1966, the plantation Labour Act, 1961, Contract Labour (Regulation and Abolition) Act, 1970, Model Rule for the Protection of health and sanitary arrangements for workers employed by CPWD and its contractors (Rule 12), make it obligatory for all of them to have facilities of a creche where over fifty women are employed. A large proportion of the factories have less than 50 women workers and hence they do not fall under the purview of the Acts. Some of the voluntary organisations have also organised "mobile creches" at the work-sites for the children of working mothers.

Balwadis

The Balwadi programme was sponsored first time by the Government of India in 1958 in selected Community Development Blocks, as part of Welfare Extension Projects. These projects are of multi-purpose nature and extend services for women and children, like balwadi, craft activity, social education maternity services for women and recreational programmes etc. The balwadi component provides recreational facilities, nutrition and health education. In 1986-87. 11 WEPs were working with nearly 249 Balwadis aided by CSWB.

Early childhood education centres

Under the programme, financial assistance is being given to the voluntary agencies to run Early Childhood (pre-school) Education Centres for children in the age-group of 3-6 years, as adjuncts of primary/middle schools run either by Government, local body or private managment, particularly for the disadvantaged sections in rural/tribal/backward areas in nine educationally backward States namely, Andhra Pradesh, Assam, Bihar, Jammu & Kashmir, Madhya Pradesh, Orissa, Rajasthan, Uttar Pradesh and West Bengal. To avoid any dupulication of efforts in an area, the Early Childhood Education Centres run with Central assistance under this scheme, are located in blocks and villages that do not have similar centres run under Social Welfare sector either as part of ICDS programme or as any other scheme of Government or Non-Government Body,

Programme of Early Childhood Care and Education is child-oriented, focussed around play and individuality of the child. Formal methods and introduction of the 3 R's are discouraged at this stage.

Anganwadis

Anganwadi (AW) is a grass-root level institution acting as a focal point for child care services in a village It is essentially a part of Integrated Child Development Services (ICDS) scheme which aims at providing a package of services consisting of supplementary nutrition, immunisation, health check-up, referral services for children and mother, health and nutrition education for mothers, and non-formal pre-school education for children in the age-group of 3-5 years. The scheme initiated in 1975 with only 33 experimental projects has expanded within twelve years to 1641 projects.

The objectives of pre-school education component of the ICDS are to:—

(i) develop adequate muscular coordination and basic motor skills in children;
(ii) develop creativity and aesthetic appreciation, and elementary sense of hygiene;
(iii) provide opportunity for interacting with other children of the same age-group;
(iv) develop in the child the ability to express his thoughts and feelings in fluent, correct and clear speech; and
(v) develop the habits of attending the Anganwadi regularly.

Conclusion

As we have seen in the preceding paragraphs, early childhood care and education (ECCE) is an essential input for the physical, social and mental development of the child. All commisions and committees in the past have stressed the need of ECCE and recommended it as the responsibility of the state. As a follow-up, the Government both at the Central as well as State levels have been taking a number of schemes for the children particularly those of the weaker sections of society There have been balwadis set up by the State Governments and also by Central Social Welfare Board (CSWB) under the Welfare Extension Projects (WEP) programme; creches and day-care centres taken up under the statutory requirements of the different Acts; early childhood care and education (ECCE) centres sponsored by the Ministry of Education and lastly the anganwadis (AW) which have emerged as local level institutions as part of ICDS programme. Among all such institutions, the AW is perhaps the one which covers

nearly all aspect of child development—supplementary nutrition, immunisation, health check-up,referral services to the children and the pregnant women and nursing mothers. Besides, it provides pre-school education to children in the age-group of 3-6 years and nutrition and health education to women. Not only the AW is the cheapest model in early childhood care programme, but much of its importance lies in the philosophy of community involvement and also the services are available at the door-step. It is with this background, that the Seventh Plan envisages to dovetail the early childhood education with the services of the ICDS programme. This approach is very much in consonance with the New Education Policy as well.

Various impact studies on Pre-School Education Component in ICDS have demonstrated that children graduating from AWs perform better in schools. Their performance is better on language development and personal social behaviour. They fare better on conceptional and readiness skills. Besides, exposure to ICDS enhances overall developmental status of pre-schoolers and raises the levels of mothers awareness about the value of pre-school education and health/nutritional needs of their children. However, despite all these achievements the pre-school education activities are not yet upto desired standards. They are not geared to the development of physical, mental or creative abilites of children. The method of teaching is merely a downward etension of the primary school and restricted to the three R's. The play-way method is almost negligible and there are not adequate equipments and sufficient play space available for organising pre-school activities, particularly in urban areas. Pre-school education programme should in fact include within its ambit all such activities which may not cast upon the child the burden of primary school education. It should be guided by:

(i) **Freedom of choice:** There must not be any compulsion on the child as to what activity to choose and how long he is to work at it. He should also be left free to do his work by himself or in a group as he likes.

(ii) **Auto-education:** Constant correction of errors must be avoided and the child should be left to learn with his own efforts. The pre-school worker can show in a suggestive manner once or twice how things are done neatly and properly.

(iii) **Individuality:** Each child must be treated as an individual and he must play and engage himself in activities as best as he can. Any experience of failure has a depressing effect on children. Extreme of solitude and over-protection result in un-happiness and dependency.

Provision of early childhood care and education services as contemplated on the lines above however warrant the programme of ICDS to be revitalised and constantly reviewed. Some of the suggestions in this regard are presented as follows:

(i) *AW* should be considered an essential village level institution for every 1000 population.

(ii) It should be located as adjunct to the village primary school and should also work as a Day Care Centre.

(iii) *AW* is usually looked as merely a feeding centre. This image in the mind of the people needs to be wiped off. Stress should be more on nutrition and health education rather than providing merely feeding.

(iv) *AW* should work as an educational/motivational/catalytical centre for bringing awareness among the community about the essential requirements of early childhood. As for example, the community should be taught about the severe consequences of the malnutrition and under-nutrition on the physical and mental health of the child, and motivated for having their children immunised from all preventable diseases. Services within *AW* should be provided only from supplementation point of view.

(v) The AW should feel responsibility towards each child within its jurisdiction and not only for those who come to anganwadi. It should ensure that each child in AW area gets all immunisation doses and other prophylaxis services in time. In case, a child suffers from any illness, it should be immediately referred to the PHC/CHC. Similarly, early detection of common disabilities in the region by the AW personnel should be necessary.

(vi) The pre-school education component in the AW should be adequately strengthened. The functionaries and trainers should be oriented through refresher courses in pre-school education and given field training so that it is strengthened both at pre-service and in-service levels. Instructional material for use of trainers and trainees should be developed. Material for children-pictures, posters, minimum essential play materials, should be made available in all anganwadis and replenished periodically.

(vii) To carry out these activities, it should be necessary for each AW to have at least three persons—one Anganwadi Worker—as overall incharge of AW, one Balwadi Worker for imparting pre-school education and one Helper. These personnel should hold collective responsibility in running the AW. They should be made regular staff of the Government and paid from State exchequer.

(viii) It should also be necessary to organise a 'Mahila Mandal' (MM) for each area of AW's jurisdiction. The MM should advise from time to time in the functioning of the AW and also have vigilance on its day-to-day activities.

(ix) There is need to have a separate Department for Early Childhood Care and Education in all States and UTs. The Department should be manned with experts from all related disciplines like social work, health, education etc. and they should form part of the cadres in the respective Departments of the State Governments. ☐☐

Pre-school education: role and relevance

Dr. Thomas Cangan
Ms. Mridula Mauria

Education is a continuous process. Starting with pre-school education, every step has its own role to play in the development of man. In this article the author minutely studies the role and relevance of pre-school education in the development of a child. Analysing the system in detail, the author spells out the barriers in its effective implementation, He feels that the planners, the administrators and the community should work together so that the citizens of the morrow are given the best in pre-school education.

THERE CAN BE NO TWO OPINIONS ON the need for 'creative outlook' among members of any forward looking society. Creative nature in a human being is often not inherent but is inculcated through the social learning process. Therefore, the multitude of new addition of members into our society need to get proper foundation of Physical, Psychological and Cognitive Development—so that in the process a 'creative outlook' is imprinted in them. Non-formal pre-school education as social learning process precisely aims at that.

According to the 1981 Census there are 9.7 million children in the age group of 0-4 years who form 14.17% of the total population (See Annexure-I). Non-formal Pre-school education in our country is offered to children in the age group of 3-5 years. The ultimate aim of pre-school education is that the participants develop a desirable pattern of rapport with their peer group and with the community even though reducing the school drop out ratio. Physical and psychological growth of children may also form specific objectives. Thus pre-shool education should be for the children, an organised social activity of learning and communicating oneself. This process should also endeavour to develop in the child, desirable social attitudes, values and behavioural pattern and also provide environmental stimulation.

The need for social learning and complimentary existence of a human being in a society needs no emphasis. As seen above, pre-school education lays the foundation for an appropriate social adaptability of the child. The age group of 3-5 years for the above purpose is most important in the sense that this is the age which is most plastic, impressionable and educationally potent period of a child's life. There is enough research evidence to suggest the crucial importance of the first 5 years of a child's life in his physical, emotional, social and intellectual developments. Retardation is likely to result due to deprivation in physical and social environments during this period of his life. It is here that pre-school education plays a major role.

The need for pre-school education in our country has its own peculiarities mainly due to the presence of high ratio of children who hail from the culturally and socio-economically disadvantaged strata of the society

It is estimated that 90% of the Indian children go to the Primary school at the age of 5 or 6 without having had any kind of preparation for schooling. It is observed that these children who enter schools without any formal preparation have limitations in terms of vocabulary, concept formation and working in groups. This is one of the major contributory factor for the large scale school drop outs in the educational stream.

Available data on drop out rates at primary stage of school gives an alarming picture. Out of every hundred children who entered primary school in 1964-65, 67.1 dropped out of the educational stream by the year 1968-69. As against the above, the drop-out rate could be marginally brought down to 62.7 for the period 1973-74 to 1977-78. The following table gives the drop out rates during 1964-65 to 1977-78 among children attending primary school in India.

Objectives

Pre-school education basically aims at the total development of the child in his physical, social, emotional and cognitive aspects so as to impart a 'creative outlook' about the society in him. Therefore, the specific objectives of any programme related to pre-school education should have objectives which are tuned to the following:—

1. To develop in the child a good physique, adequate muscular coordination and basic motor skills.
2. To develop in child good health habits and to build up basic skills necessary for personal adjustment

such as dressing, toilet, eating, washing, cleaning etc.

3. To develop desirable social attitudes and manners, to encourage healthy group participation and to make the child sensitive to the rights and privileges of others.
4. To develop emotional maturity by guiding the child to express. understand, accept and control his feelings and emotions.
5. To encourage aesthetic appreciation.
6. To stimulate intellectual curiosity and to help him understand the world in which he lives and to foster new interests through giving opportunities to explore, investigate and experiment.
7. To encourage independence and creativity by providing the child with sufficient opportunities for self-expression, and
8. To develop the child's ability to express his thought and feelings in fluent, correct and clear speech.

Table showing drop-out rates at primary stage of school for India. (1964-65 to 1977-78)

Years	Percentage drop out
1964 65 to 1968-69	67 1
1965-66 to 1969-70	67 1
1966-67 to 1970-71	66.8
1967-68 to 1971 72	66 5
1968 69 to 1972-73	64 9
1969-70 to 1973-74	64 1
1970-71 to 1974-75	63 2
1971-72 to 1975-76	62 8
1972 73 to 1976-77	63 1
1973-74 to 1977-78	62 7

Source Child in India, 1985, Table No 3 30 Page No 336

Curriculum

Desirable social attitudes and manners Desirable social attitudes and manners can be inculcated in a child by taking turn to play with toys, sharing play materials or food with other children, respect for school property as well as for his own, confirming to the demands of group etc.

Cognitive Development Particularly, the children from the dis-advantage groups needs opportunities for development of language and concepts. This is crucial for children, as exposure to language at home is minimum. Words-wise, vocabulary is limited in the families. These language experiences not only help in language but also in concept development. Concepts of form, number etc , need to be developed in children before they enter Primary Schools.

Habits of Health and Hygiene Washing hands before eating, brushing teeth regularly, keeping clothes clean, keeping the surroundings neat etc.— can be indicated by story telling, puppetry, free conversation etc.

Physical Development: Pre-school child needs a great deal of opportunities to develop his muscular co-ordination. Activities such as climbing, swinging, running etc., occupy important place in pre-school education. It gives muscular co-ordination and joy. For finer muscular coordination beads, cutting, pasting, drawing etc., are used.

Expansion of pre-school education

National plan of action for the international year of the child has recommended that pre-school education should be made universally available to children of weaker sections of society and those belonging to poverty groups.

Even though there was a steady growth in the number of children attending pre-school education in the country, the important development in this direction is the genesis of ICDS. It aimed at giving package service of immunisation, health check-ups,referral services, supplementary food, health, education, nutrition for mothers and informal pre-education for children between 3 to 5 years. The impact of ICDS on attendance of pre primary classes at the national level even though not measured in the strict sense, the following table shows the rapid growth of the number of children attending classes in the recent decades.

Growth of school attendance in pre-primary classes from 1950-51 to 1982-83, for India

(in 00's)

Years	*Male*	*Female*	*Total*
1950-51	150	130	280
1960-61	970	820	1790
1970-71	1900	1680	3580
1980-81	5010	4170	9180
1982-83	5630	4580	10210

Source: Child in India, 1985 Table No. 3.26 Page No. 320

Barriers in implementation

We have already established that the effectiveness of schooling significantly depends on the characteristics of the children entering the pre-school education. It is also widely believed that most children from poor segments of the society perform poorly compared to children from the higher segments of the society

One of the hurdles in effective implementation of pre-school education is the erroneous perception of PSE by the parents Parents send their children for PSE with slates and books with them. Any attempt to discontinue the element of formal learning might create problems and a credibility gap between the PSE and the community. This situation demands a cautious approach by the planners and administrators who need to evolve appropriate mechanisms to correct the perception of the parent on PSE so that they may not equate it with the learning of reading, writing and arithematic.

It is often observed under programmes implementing PSE, majority of the workers involved are illiterates. This is a major handicap to the basic philosophy and thrust of such programmes. Under ICDS programme it is commonly reported that the illiterate Anganwadi

workers are unable to do justice to the element of PSE. This reality gives an impression that the planners either shy away from reality or the administrators have not realised the same. With due consideration for the non-availability of semi-literate and literate workers for evaluation programmes, the administrators can still create avenues for hope to improve upon the existing situation.

In remote rural villages the PSE programmes encounter peculiar problems such as the community refusing to allow children of low caste groups to sit with those of higher castes. As a matter of fact this attitude and approaches feed negative inputs in the psycho-social growth of the children. This is an area wherein the role of planners is felt more for some positive operational solutions.

Target fever —the new hurdle

Often the perceptions of planners and administrators are far from reality. Further, of late the planners are infected with the 'target fever'— no matter the same is relevant to the context or not. It is widely accepted that such approaches miss the very objectives of the programmes. There is a need for self introspection among the planners to improve up on the approaches.

Neglect of primary education

The planners in recent decades have introduced new trends in financial expenditure on education which indicates that primary education is loosing its priority position. Should the judicious distribution of funds need to be stressed? With the expansion of higher education many states have been increasing their expenditure on this sector at a higher rate than that applied to primary education. It is painful to watch this taking place in educationally backward states like Bihar, Orissa U.P. and Rajasthan. Enormous subsidies are provided for higher education which undoubtedly hurt the interests of the group going for primary school. In the national level whereas 85% of the educational funds are spend on higher education to benefit 7% of the student population, only 15% of the fund is spend for 93% of the student population.

Merely formulatung PSE programmes and operationalising them would not help. The planners need to work-out ways and means to keep the programme live by necessary infrastructural inputs.

Community involvement

Before bringing about arbitrary changes based on some isolated quantiative studies here and there, the planners and administators need to know the perception of the community and involve them as much as possible in the programme. Involvement of the community in the selection of appropriate accomodation for the PSE in the villages, utilising the local girl for teaching (Balsevika) and involvement of women and youth clubs will go a long way in the success of PSE in the rural villages.

Monitoring

Effective supervision through the regular visits of Gramsevikas and Extension Officers (Social Welfare) will enable PSE centres to rise to the expectations of the programme. The BDO as the implementing authority should be made to realise his responsibility in the programme. This will bring about an attitudinal change in local self-government agencies for effective participation in the programme.

Conclusion

Pre-school education as an organised social activity of learning and communicating for the citizens of tomorrow needs the inputs of not only the planners and administrators but also of every organisational network of the society. Therefore, any re-orientation of approaches towards effective implementation of pre-school education needs to take into account the community dynamics.

Annexure 1

Child Population by Age-Group in India, Census 1901 to 1981

Sl. No	Census Year	Child population and its percentage to total population in the age grop (yrs) 04	5-9	10-14	0-14
1	2	3	4	5	6
1	1901	29,832	32,338	28,196	90,366
		(12.56)	(13.62)	(11.87)	(38.05)
2.	1911	34,116	33,861	27,068	95,045
		(13.58)	(13.48)	(10.78)	(37.88)
3.	1921	30,920	36,696	29,244	96,860
		(12 35)	(14 65)	(11.68)	(38 68)
4.	1931	36,660	38,914	31,369	1,07,043
		(13.18)	(13.40)	(11.33)	(38 14)
5.	1941	42,904	45,291	35,914	1,24,109
		(13.53)	(14.28)	(11.33)	(39.14)
6.	1951	48,085	45,437	43,542	1,37,054
		(13 48)	(12.74)	(12.20)	(38.48)
7.	1961	66,089	64,656	49,287	1,80,032
		(15.06)	(14.74)	(11.24)	(41 00)
8	1971	79.560	82,007	68,768	2,30,335
		(14.51)	(14.96)	(12.55)	(42.00)
9.	1981	97.086	92,145	82.769	2,72,00
		(14.17)	(13.45)	(12.08)	(39 70)

The Figure in parenthesis refer to percentage to total population.

Source: Child in India, 1985 Table No. 1.4 Page No. 13.

Full Excise Duty exemption on excess sugar production

The Government has completely waived the basic Excise duty on sugar produced in excess over the corresponding periods of last three years. This exemption has been given to encourage higher production of sugar during the late crushing season of May to July 1988. □

Education for leadership

Shamsuddin

In order to have excellence in achievement, the author feels, education will have to be viewed from a new angle. Then it will be the concern of not merely teachers, parents and students, but society as a whole will have to evince a keen interest in it. For teachers it will not merely be a profession to keep their body and soul together but a religion in which to work with a missionary zeal.

ACCORDING TO BUHLER, A FAMOUS psychologist, leadership can be observed in early age, say, at the age of one year. At pre-school level, leadership may assume many forms. A child becomes a leader by virtue of his dominating attitude. So here the child imposes his own will on others.

A certain child may assume leadership because of his popularity, social qualities and talents. Thus, he can have leadership without imposing his own will upon others. Because of imitative, pleading behaviour, he becomes a leader. But this first kind of leadership is short-lived.

The needed qualities

A numbers of studies of children who exhibit qualities of leadership have been conducated, and it has been found that leaders in children are superior in ability to the average, aspecially in the spheres in the which they have been recognised as leaders. A leader on the playground will be a good sportsman. So one quality of a leader in childhood is his recognised superiority.

To be a good leader, a child must also be a good follower, in the sense that he must be responsive to the needs of his mates. A bility to understand and sympathise with the needs of class-mates and to realise thier needs is the second quality of a good leader.

Leadership is a relation between the leader and those who are followers. Leadership does not entirely depend upon the qualities of the leader only, but also on the characteristics of the followers and the conditions which prevail at that particular time. So a child who is a leader in the one group may not be a leader in the other group.

Similarly, one group may accept a particular child as their leader in some circumstances, but refuse to do so in other circumstances. So the concept of leadership is not absolute and permanent. but it is relative.

Leadership may depend upon certain skills possessed by the leader. On a sportsfield, a child with excellence in sports may be a leader in spite of his academic backwardness. In lower classes, proficiency in games datermines the leadership.

The second factor is experience. An overtimer in the school may gain the lead for some time, e.g. a child in the second year has got some advantages over a child who is a fresh entrant, but some time later, he is bound to lose his leadership..

New demands made by the school, e.g, skill arithemtic, organising co-curricular activities, etc., mayk give a lead to brilliant children. Suppose new projects are started in the school, a bright child picks them up and he becomes a leader. But later on, leadership may be shifted on the shoulders of others.

So we find that leadership is a shifting thing. It depends upon situations. These changes of roles appear at all stages.

It is, however, found that a child who is submissive, who lacks in self-assertion, may not become a leader at all, inspite of favourable conditions.

Situation, deciding factor

So leadership has reference to situation. As a situation changes, leadership may also change, e.g., a leader on the sports ground may not be a leader in the class in the academic sphere. Too much familiarity may breed contempt, and if a child moves in a new locality, he may become a leader in that new locality, though in the old locality, owning of familiarity, his qualities are not recongised. As a result of changing environments or situations, the role of a child also changes.

Experimental studies have been conducted at various age levels to discover factors favourable to leadership. It has been shown that leadership may be assumed in various ways. There are several techniques.

Two children might be leaders. But they may become leaders by using different methods, e.g. domination, co-operative techniques or resourcefulness.

Secondly, leadership is a relative affair. No person is univerally a leader in every type of situation. Leadership is a relation between a leader and the led. Whether a person becomes a leader, to a certain extent depends upon how far he satisfies the needs of the group.

So the leader has to be extremely sensitive, not only to know the needs but to satisfy them also. A leader has to be able to rise higher than the level of the followers.

Large differences in mental levels between the two, however, are unfavourable. Desireable qualities for leadership are intelligence, popularity, initiative, personal charm, expert skill and so on.

Certain environmental conditions also are important. One study was conducted wherein home environments of leaders and non-leaders were studied. It was found that girl leaders came from homes where the mother is reasonably free in bringing up children, where the mother is not conservative or conventional and gives freedom and opportunities to her children.

Freedom and opportunities at home are related to leadership. But no significant difference was found in home environments of boy leaders and non-leader boys. It may be because of the fact that boys are naturally given more freedom than girls.

Vital role

Environment in the community plays a vital part in the training of the boy-leaders. There seems to be a relation between home disciplinary programmes and qualities of leadership. Rigorous discipline makes an adult a good obeyer. However, such upbringing decreases spontaneity persistence and initiative.

By giving a child an opportunity for initative, the possibility that he will show these qualities in the futrue in a better manner is greater.

There is a saying, "Strong-willed parents have weak-willed children. "Such children do not get opportunities to exercise their will; so they become weak-willed. Just as too much discipline is bad; so is too little discipline; for the child may develop a play-boy attitude with no settled habits. A child may be a spoiled child if the parents are extremists.

Good discipline is defined as "reasonable firmness plus needed affection for children to choose and act for themselves." Thus, experience and opportunities are important factors leading to leadership.

In America, most of the studies have shown that a large poroportion of leaders comes from smaller High Schools and Colleges. Why is it so ? This is because small communities in their attempt to carry on their activities provide opportunities over a wider range of individulas. So the changes of picking up and organising different experiences are greater in rural and smaller areas.

Educational implications

The fact that leadership is a shifting thing has a practical implication for education. The school should offer a variety of opportunities for leadership as far as possible. The greater the variety of cocurricular activities, the greater the opportunities for the development of leadership.

The system which keeps some pupils year after year under the same teachers is not desirable. Too much familiarity may not enable a teacher to recognise the qualities of leadership. Pupils should be able to come in contact with different teachers, as well as with different situations.

A curriculumn should be broadly based to suit the various needs of the students. Something in this direction is being done in Multipurpose High Schools. Every student cannot, it should be noted, become a leader. But in every one there is a desire to excel others, a desire to do the best, and hence distinguishing mark of an able teacher is to recognise and encourage leadership qualities in child.

The teacher should study each child and understand its special abilities, aptitudes, and then strive to give opportunities for the expression of these abilities. He must be in a position to draw out the best from every child; for every child is 'father of the man' and has the spark of divinity in him.

Democracy needs leadership in all walks of life-social-political, industrial and cultural Schools should prepare persons communities. Primary education will help a lot in this regard, and leaders will come from the masses as well; but leadership with a higher standard of education, efficiency and competency must be thrown up by secondary and university education.

It should produce individuals with initiative, character, resourcefulness and courage to forge new openings for improvement in national life.

Every individual who is to be prepared for leadership should get perfect liberty. He should not be a slave to his original uncivilised mode of life. He should be free from ignorance, pre judice and tradition. He should not act as his predecessors acted, but think and act in his own way.

He must poseess liberty of speech and conscience to understand and make out the problems of human relationships. Here liberty of the individual should not be taken to mean absolute liberty without any reference to the interest of others, as this will lead to great disorder in society.

Correct concept

The real idea behind liberty is that the individual should progress by and for the life in group. Rights and duties go together, hence the privileges and powers of an individual are relative to those of others.

A free individual has 'freed' intelligence, extensive

(Contd. on page 32)

Seed strategy to boost agricultural yield

Dr. S.S. Khanna & Dr. M.P. Gupta

Here, the authors review the progress made under various seed programmes/ projects during the Five Year Plans. Highlighting the importance of seeds they maintain that without good seeds the investment on fertiliser, water, pesticides and other inputs will not pay the required dividend. Therefore, planning for releasing new varieties of seeds should be made well in advance and results of various tests on seeds reviewed by the Seed Release Committees at the Centre and the State level, they feel.

THE HISTORY OF AGRICULTURAL PROGRESS from the early days of man has been the history of seeds of new crops and crop varieties brought under cultivation. In the early days it was achieved through the cultivation of indigenous but useful plants, taken through introductions. Selection of superior types from cultivated plants constituted the next stage of progress. During the course of time many useful selections were made but there was slow progress in crop investment. Later, through the use of simple techniques of selection— hybridisation and polypolidisation— the scientists could develop new and slightly better varieties. Thus, the pace of progress remained slow for a long time. It was only during the last two decades that a revolution took place in our concept of yield potential of the major cereals and millets due to the discovery of morphological factors such as the dwarfing influence and the response of self-pollinated crops like rice and wheat to increased doses of fertilisers. Similarly, in the case of cross-fertilised crops, the exploitation of hybrid vigour became the basis of making significant advances in yield. The introduction, development and release of dwarf varieties of rice and wheat and hybrids of maize, jowar and bajra have helped to raise the sights as regards yield possibilities and consequently have stimulated interest among the farming community with new agronomic package of practices revolving around the cultivation of high yielding varieties.

However, to the farmer all this scientific research would be of little value unless he gets seeds, which are genetically pure (true to type) and possess other desired qualities, namely, high germination percentage and vigour, high purity, sound health, resistant to diseases, insects, pests and other pathogens etc. When the farmers do not get seeds possessing these qualities the yields they obtain may not be of the desired level. Only seeds with assured quality can be expected to respond to fertilisers and other inputs in the expected manner. Otherwise as has been aptly said what are known as the seeds of hope may turn into seeds of frustration.

There is yet another aspect of the importance of good seed. Among the inputs used by farmers, seed is the cheapest. It is a basic input and forms only a small part of the total cultivation expenses. Yet, without good seed the investment on fertiliser, water, pesticides and other inputs will not pay the required dividend.

The indifference towards quality seed which hitherto prevailed should, however, cause no surprise. It epitomised the more general indifference towards scientific agriculture. Since it is a biological industry,

good agriculture depends upon good seed and vice-versa. One cannot exist or advance without the other. The pace of progress in food production, therefore, will largely depend upon the speed with which we are able to multiply and market good quality seeds of diferent high yielding varieties.

First Five Year Plan (1951-56)

Greater emphasis was placed on the development of seed programmes during the First Plan period. The use of improved seed was made the basis for calculating the additional production potential of foodgrains.

The Grow More Food Enquiry Committee (1952) constituted during this period revealed that by and large seed of requisite purity was not available to farmers. An Expert Standing Committee was also set up in 1952 by ICAR to formulate concrete proposals for the seed improvement programme.

As a result of these developments the schemes for seed multiplication and distribution came into existence in all the States of India. These schemes proved useful in the following manner:

(1) The system of distribution of improved seeds of foodgrains came into existence.
(2) The experience gained in the operation of these schemes was helpful in coordinating agricultural work.

In spite of this, the progress made during the First Plan period on the whole was poor, and the seed programmes were confined primarily to seed distribution often with subsidy.

Second Five Year Plan (1956-61)

As in the First Plan, the use of improved seed was made the basis for 10 per cent additional food grain production. Many important developments having far reaching significance took place during the Plan period. Notable among these developments was the setting up of the All India Coordinated Maize Programme. The Second Plan attached special importance to the multiplication of nucleus seed into foundation seed at block level and recognised it as a basis for further multiplication and eventual distribution of improved seeds to farmers. A policy that each National Extension Service Block should have a seed farm and seed store was laid down during this period.

Third Five Year Plan (1961-66)

Serious efforts were made during this Plan period to overcome the shortcomings of the seed programmes. The release of the first four hybrids of maize in 1961 necessitated the creation of a separate organisation for seed production in order to exploit the full production potential of these hybrids. This necessity led to the development of blueprints by the Ministery of Agriculture to assure rapid multiplication and distribution of pure hybrid (maize) and ultimately gave birth to the Central Seeds Corporation (National Seeds Corporation) in 1963. The important considerations in establishing the Central Seed Corporation were:

(1) To establish foundation and certified seed corporation;
(2) To encourage and assist in the development of seed production and marketing of seeds;
(3) To develop a system of Seed Certification Programmes, Seed Law and Seed Law Enforcement Programme;
(4) To train personnel involved in seed programmes; and
(5) To coordinate the improved seed programmes.

Fourth Five Year Plan (1969-74)

The central objective of agricultural development in the Fourth Plan formulated by the Government of India was to transform Indian agriculture from a predominantly traditional way of life into an industry based more and more on the adoption of science and technology, making efficient use of the available resources, providing necessary economic incentives for greater resources, providing necessary economic incentives for greater investment on the part of farmers and giving them a fair measure of protection against price fluctuations, unduly high costs and to the extent possible against risks of crop failure on account of natural calamities. One of the most important planks of this strategy for agricultural development in the Fourth Plan was to select a few areas with assured rainfall and/or irrigation for concentrated application of a package of practices based on improved varieties of seeds responsive to heavy doses of fertiliser and avilability of all these important inputs, and to fix special targets of production of foodgrains for such areas. Seed being the most important key input for this strategy, it was necessary to ensure that it did not become a limiting factor. The Tarai Seed Development Project was set up to meet, at least in part, the above goal. It was to produce seeds of high yielding varieties to meet one-third of the requirement of the high yielding varieties programme in the Fourth Plan period.

Fifth Five Year Plan (1975-79)

During this Plan a further review of the seed industry was carried out by the National Commission on Agriculture. The Commission submitted an interim report on multiplication and distribution of quality seeds in 1971 and stressed the necessity of maintaining the purity of high yielding varieties of seeds. It made the following recommendations in the final report submitted in 1976.

(1) The seed industry should be expanded on commercial lines and it was suggested that foreign collaboration could be invited, if necessary.
(2) A system of national registry of varieties should be developed by ICAR and the Central Seed Committee.
(3) Creation of specialised committees/groups of crops/specialised wings to tackle expeditiously

the various problems arising from time to time.

(4) Encouragement to small participants to form compact areas of seed production.

(5) Institution of promotional measures namely, seed crop insurance, exemption of levies, taxes, octroi, etc. timely release of wagons and unobstructed rapid movement, concessional air freight, etc. and stoppage of detrimental practices such as sawai system.

(6) Formation of a network of seed processing and storage plants compatible with the magnitude of the seed industry.

(7) Seed processing should be made compulsory.

(8) Development of fabrication of processing equipments.

(9) Research on various aspects of Seed Technology.

(10) Storage of breeder, nucleus seed should be done under controlled conditions, and that of certified seed under damp-proof, insect-free warehouses.

(11) Rigorous enforcement of Seeds Act.

(12) Growth tests should be made an integral part of seed testing.

(13) Compulsory certification may be desirable for seed material of hybrids and vegetatively propogated crops.

(14) Selection of congenial areas of seed production.

(15) Establishment of suitable machinery for tackling seed problems of some selected crops e.g. sugarcane, fodder crops, horticultural and plant ation crops, papaya, guava, banana, pineapple, mango, citrus, cashewnut, cardamom, etc.

(16) Teaching of seed production technology to be introduced in agricultural universities/colleges.

(17) Department of agriculture at the Centre and in the States should have three distinct wings, each dealing respectively with
(a) Input aspect (b) Law enforcement and (c) Certification

(18) Organisation of foundation and certified seed agencies in an integrated manner.

It is in the light of these various recommendations that the Government of India has decided that a number of organised seed production agencies should be set up in the country so that seed support to the planned crop production programmes may be assured.

Sixth Five Year Plan (1980-85)

The National Seed Projects (Phase I and II) launched during the Fifth Plan period and still under execution was a major effort in meeting the requirements of improved seeds. Augmenting infrastrucural facilities like setting up of processing plant, seed certification agencies, seed testing laboratories etc. were some of the important programmes of the project. The project, in brief, aimed at placing the seed industry on a scientific footing by reorganising the functions of various institutions in a systematic manner. It was observed in the past that the production of certified seeds was limited on account of non-availability of adequate volume of breeder and foundation seeds. Plan provisions were made to strengthen the National Seeds Corporation to enable it to assume direct responsibility for production of breeder and foundation seed so that the shortage exhibited at the National level in the past can be eliminated. The National Seeds Corporation was also proposed to be strengthened for production of vegetable seeds. The State Farms Corporation of India would also play a bigger role in the production of certified seeds of important cereals and other crops especially oilseeds, vegetables, etc. on their large and scientifically managed farms.

Seventh Five Year Plan (1985-90)

Having regard to the present position, it is proposed to have an overall replacement rate of certified seeds at 10 per cent for the country during the Seventh Plan period. A target of 11.7 million quintals of certified/quality seeds is contemplated for the Seventh Plan. Encouragement has also been given to the private sector in seed production. Adequate provisions have already been made in different Acts and orders for ensuring the right quality of seeds. There is, however, no effective enforcement by the agencies concerned. Necessary steps are required to be taken to strengthen these agencies and increase the number of samples to be tested. In addition, seed testing laboratories have to be strengthened by way of manpower, equipment, training management and organisational set up. There are a number of on-going programmes like setting up of seed testing laboratories and creation of additional storage capacity. These would continue to receive attention during the Seventh Plan period. Also, for meeting the emergent needs of seeds in different States the programmes for building up buffer and reserve stocks of seeds by the National Seeds Corporation would be taken up on a larger scale.

National Seed Project Phase I and II

In order to give a boost to the production and supply of high quality seeds and expand the seed processing capacity, the National Seeds Project-Phase I (NSP-I), which was sanctioned with World Bank assistance for the States of Andhra Pradesh, Maharashtra, Punjab and Haryana, became operational from October 1976. This phase was completed by the end of December, 1984. NSP-II, which was intended to cover the remaining States wishing to participate in the programme and to complement the efforts of NSP-I, became effective from December 1978 and continued till the end of 1985. The States which participated in NSP-II were Bihar, Karnataka, Orissa, Rajasthan and Uttar Pradesh. Under these two Projects, seed production, processing, storage and marketing activities were to be decentralised through the establishment of State Seeds Corporations. As a result, State Seeds Corporations have been set up in 13 States, namely, Punjab, Haryana, Uttar Pradesh, Rajasthan, Maharashtra, Karnataka, Orissa, Bihar, Assam, Madhya Pradesh, Andhra Pradesh, Gujarat and West Bengal. Attention has also been paid to the quality control of seeds through the setting up of seeds testing laboratories,

seed certification agencies and enacting Seeds Legislation. Including the Central Seeds Testing Laboratory in the Pusa Complex in New Delhi, 73 seed testing laboratories have been set up in various States. Seeds certification agencies have been established in these States, namely, Punjab, Haryana, Uttar Pradesh, Rajasthan, Maharashtra, Karnataka, Andhra Pradesh, Orissa, Assam, Gujarat, Himachal Pradesh, Jammu & Kashmir, Madhya Pradesh, Kerala, Tamil Nadu, West Bengal and Delhi.

Performance of seed production/distribution

For proper seed production/distribution planning, estimation of seed demand is of vital importance. Seed demand is generally calculated on the basis of area projected under each crop, the seed rate and the seed replacement rate envisaged. The National Commission on Agriculture (1976) suggested certain replacement rates for different groups of crops. The replacement rate in the case of self-pollinated crops was suggested at a lower rate than that of cross-pollinated crops; in the case of hybrids, the recommended rate was 100 percent because the progeny of hybrid seeds is to be used every year. Targets of seed replacement rates were fixed for the first time during the Sixth Plan period when it was decided to achieve seed replacement rates of 10 per cent for self-pollinated crops (like wheat and paddy) and improved varieties of jowar, maize and bajara and 5 per cent for pulses and oil seeds. These targets were to be achieved by the terminal year of the Sixth Plan (1984-85). However, even with the best efforts, only partial success was achieved, the actual rates achieved during 1984-85 being as under :—

Name of the Crop	Rate of Replacement Achieved (per cent)
Whate	5.12
Paddy	6.87
Gram	1.60
Arhar	4.00
Groundnut	4.02
Rapeseed and Mustard	22.27
Safflower	5.77

Keeping the past experience in view, the following targets of seed replacement rates have been fixed for the Seventh Plan (1989-90)

Crop	Target of Seventh Plan Replacement Rate (Percentage)
Wheat, paddy, ragi and barley	10
Maize, jowar and bajra	
Improved varieties	
Hybrids	100
Pulses	15
Oilseeds	10
Potato	10
Jute	50
Cotton:	
Improved varieties	10
Hybrids	100
10 10 10 10	

It has been decided that the above targets would be achieved by the use of certified seeds only except in the case of pulses and oilseeds where quality seeds also would be supplemented. This has been considered necessary due to the shortage of breeder seeds and low multiplication ratio of major oilseeds and pulse crops such as groundnut, soyabean and gram.

In order to achieve the seed replacement rates envisaged, it is necessary to produce/distribute 107.33 lakh qtls. of certified quality seeds by the end of the Seventh Plan. In addition, provision has also been made for some additional quantity of seeds required for maintaining buffer stock and meeting some export obligations. Thus, while the domestic distribution target for the Seventh Plan is kept at 107.33 lakh qtls of certified/quality seeds, the overall target inclusive of the requirement for buffer stock and export, has been kept at 117.40 lakh qtls.

Consequent on a review of the progress in respect of seeds of oilseeds crops undertaken recently in consultation with the Technology Mission on Oilseeds, (TMO), the requirements of certified/quality seeds for the remaining three years of the Seventh Plan have been worked out.

The following table indicates the progress in the distribution of certified/quality seeds.

Distribution of Certified/quality seeds

(lakh qtls)

	1980-81	1984-85	1985-86 (Provisional)	1986-87 Target	1986-87 Anti-Ach.	1987-88 Target	7th Plan 1989-90 Target
1. Cereals	19.88	26.11	31.37	33.16	35.27	36.54	55.40
2. Pulses	1.06	2.09	2.32	3.67	3.39	6.98	13.79
3. Oilseeds	2.28	6.53	5.68	8.17	6.29	10.61	14.11
4. Cotton	—	1.19	2.08	2.20	1.50	1.28	1.83
5. Jute	—	0.22	0.27	0.30	0.22	0.18	0.20
6. Potato	1.69	12.25	13.22	12.50	9.06	17.41	22.00
7. Others	—	0.07	0.07	—	0.10	—	—
Total	25.01	48.46	55.01	60.00	55.83	73.00	107.33

Crop-wise targets and achievements regarding certified/quality seeds distribution during 1985-86 and 1986-87 are given in Table 1

Table 1

Targets and achievements of certified/quality seeds during 1985-86 and 1986-87

(Qty. in lakh qtls)

Cereals	*1985-86*			*1986-87*		
	Target	*Achievement (Anticipated)*	*(+)/(−)*	*Target*	*Achievement (Anticipated)*	*(+)/(−)*
Wheat	13.31	14.60	(+) 1.29	13.65	13.24	(−) 0.41
Paddy	6.94	10.41	(+) 3.45	7.46	15.21	(+) 7.75
Maize	2.52	1.75	(−) 0.77	2.70	1.88	(−) 0.82
Jowar	3.44	2.83	(−) 0.61	3.90	3.14	(−) 0.76
Bajra	1.75	1.58	(−) 0.17	1.72	1.58	(−) 0.17
Bajra	1.75	1.58	(−) 0.17	1.72	1.58	(−) 0.14
Ragi	0.11	0.11	(−) —	0.16	0.26	(+) 0.10
Barley	0.12	0.09	(−) 0.03	0.21	0.05	(−) 0.16
Others	—	—	—	—	—	—
Total:	**28.19**	**31.37**	**(+) 3.18**	**29.80**	**35.27**	**(+) 5.47**
Pulses						
Gram	1.88	0.87	(−) 1.01	2.38	1.49	(−) 0.89
Lentil	0.31	0.23	(−) 0.08	0.33	0.21	(−) 0.12
Peas	0.27	0.28	(+) 0.01	0.30	0.27	(−) 0.03
Urd	0.34	0.35	(+) 0.01	0.39	0.48	(−) 0.09
Moong	0.67	0.32	(−) 0 35	0.77	0.49	(−) 0.21
Arhar	0.41	0.19	(−) 0.22	0.48	0.27	(−) 0.32
Cowpea Moth	0.44	0.08	(−) 0.36	0.50	0.18	(−) 0.32
Total:	**4.32**	**2.32**	**(−) 2.[illegible]0**	**5.15**	**3.39**	**(−) 1.76**
Oilseeds						
G. Nut	6.92	3.77	(−) 3.15	7.94	4.55	(−) 3.39
R/Mustard	0.20	0.48	(+) 0.28	0.19	0.45	(+) 0.26
Til	0.01	0.14	(+) 0.03	0.02	0.03	(+) 0.01
Sunflower	0.09	0.28	(+) 0.09	0.09	0.25	(+) 0.16
Soyabean	0.62	0.81	(+) 0.19	0.58	0.78	(−) 0.20
Linseed	0.19	0.06	(−) 0.13	0.22	0.02	(−) 0.20
Niger Castor	0.08	0.18	(+) 0.10	0.09	0.15	(+) 0.06
Safflower	0.04	0.06	(+) 0.02	0.05	0.06	(+) 0.01
Total	**8.15**	**5.68**	**(−) 2.47**	**9.16**	**6.29**	**(−) 2.89**
Fibres						
Cotton	1.01	2.08	(+) 1.07	1.08	1.50	(+) 0.42
Jute	0.17	0.27	(+) 0.10	0.17	0.22	(+) 0.05
Mesta	—	—	—	—	—	—
Potato	12.77	13.22	(+) 0.45	14.62	9.06	(−) 5.56
Others	12.77	13.22	(+) 0.07	—	0.10	(+) 0.10
Grand Total:	**54.61**	**55.01**	**(+) 0.40**	**60.00**	**55.83**	**(−) 4.17**

Source: Seeds Division: Deptt. of Agri. & Coop.)

While the overall position relating to seed distribution has maintained good progress during the Sixth Plan period and also in 1985-86, there has been virtual stagnation in 1986-87. Looking to the progress made in the recent years, it would be difficult to achieve the targets set for 1987-88 unless concrete measures are taken to resolve the main constraint of inadequacy of breeder seed production. Besides, the progress in respect of certified/quality seeds of pulses and oilseeds has been tardy which is also due to inadequate breeder seed production. As regards performance during the first two years of the Seventh Plan, the position regarding wheat and paddy is quite satisfactory, and in fact during 1985-86, the anticipated achievements were more than the targets. Similarly, no problem has been observed in the case of fibre crops and the achievement has been in excess of the targets. In the case of oilseeds crops, the target of seed distribution has been achieved except for groundunt and linseed. However, with the present trend on covering more area under soyabean and sunflower, a spurt in the demand for these seeds is being felt. In the case of pulses, the distribution targets have been achieved only in respect of black gram (urd) and shortfalls have been observed with regard to seeds of other pulses crops. During 1986-87, distribution of potato seeds was considerably lower than the target.

Buffer stocks of foundation and certified Seeds

The Buffer Stocks of Foundation and Certified Seeds is intended to meet the sudden spurt in seed requirment of some short duration varieties due to natural calamities like floods, drought, diseases, etc. It is our experience that almost every year, some part or the other in the country suffers from floods or drought or both. While

the floods wipe out the existing crops and farmers go in for the alternative crop, the delay in monsoon results in sudden demand for short duration varieties, which is not generally planned by the agencies engaged in the seed business. It is, therefore, considered necessary to have an alternative basket of seeds to meet such situation.

The NSC cater to the demands of almost all the seeds of different crops in the north-eastern States, viz., Assam, Meghalaya, Tripura, Manipur, Nagaland, Arunachal Pradesh and Mizoram. NSC had also been asked to operate the Buffer Stock Scheme in respect of oilseeds, pulses, maize and paddy to cater to the needs of the north-eastern States. During the National Seminar on Seeds held in June, 1986 it was also one of the recommendations of the Seminar that the State Seeds Corporation should also be allowed to perticipate in the Buffer Stock Scheme in addition to the NSC.

Planning for Seed

The planning for releasing new varieties of seeds have to be made well in advance as it normally takes 3 to 4 years before a new variety can be released. Firstly, the breeder has to develop nucleus seed from which the breeder seed is developed. From it the foundation seed is produced. The foundation seed is given for multiplication and the certified seed is available for passing on to cultivators. Before releasing a new variety, it should be tested on the farmers' fields on a large scale and the results should be reviewed by the Seed Release Committees at the Centre and the State level. The Seed Release Committee should have representatives of agricultural universities, Government departments, National and State Seed Corporations.

Planks in the New Seed Strategy

(i) Subsidy on Groundnut and Soyabean Seeds:

Higher seed rate, low multiplication ratio and high cost of seeds are the main factors in the way of increment supply and use of certified seeds. Groundunt and soyabean are mainly sown in the kharif season and they also face the risk of crop failure due to monsoon aberration which acts as a further deterrant for the use of certified seeds. The seed strategy will have to be a part of the overall development strategy for the crop.

(ii) Need for concentration on the production of newly evolved varieties:

Indian farmers have sufficient experience in the production of quality seeds of self-pollinated crops. In fact, a large quantity of seeds is exchanged between the farmers themselves. The role of private seed industry is mainly limited to the production and marketing of hybrid seeds and low volume/high cost seeds like vegetables. It is, therefore, desirable that public sector agencies may initially concentrate on the production and distribution of newly released varieties of self-pollinated crops of cereals.

(iii) Decentralisation of the Production and Distribution of Nucleus and Breeder Seeds:

The main weakness of the present system has been shortage of breeder seeds of certain crop varieties, over-production of certain other crop varieties, delay in despatch and non-fulfilment of the commitments by some breeders and indentors. To overcome this problem, DG (ICAR) and Joint Secretary (Seeds), Department of Agriculture & Cooperation have written to the States and all other concerned agencies during April and May, 1987, respectively outlining certain proposals for introducing a system of decentralisation of the production of nucleus and breeder seeds of all crop varieties from rabi 1987-88.

(iv) Role of Private Seed Industry:

Various private seed companies have shown interest in production and distribution of seeds of cereals and oilseeds and some of them also propose to collaborate with multinationals to produce, market and export surplus seeds. This is a welcome step. Quality standards and reasonable prices will have to be ensured.

(v) Quality control:

Seeds Act, 1966 and the Rules framed thereunder have adequate provision for ensuring quality of seeds. The seed testing laboratories and seed certification agencies, functioning in the States, are responsible for checking and certifying the quality of seeds.

(vi) Utilisation of Processing facilities:

Only 77.5 per cent of the seed processing capacity was utilised during 1985-86. This points out the need for stepping up the capacity utilisation which has been built up at considerable investments.

(vii) Demonstration plots:

Provision of seed demonstration plots is almost missing in the seed strategy adopted by various Seed Corporations/companies. Demonstrations would help in convincing the farmers about the efficacy of quality seeds and the needs to purchase good quality seeds from reputed agencies. It is, therefore, necessary that all the public sector seed corporations and big private seed companies are encouraged to take up organisation of demonstration plots and to make it a part of their marketing strategy.

Performance of NSC and SFCI:

The performance of these two Corporations needs to be critically evaluated with a view to improving their operational, physical and financial results It is also necessary to process quickly the recommendations of the Study Group which examined the functioning of the SFCI and take appropriate follow up action.

Efficient Use of Seed Farms in the States:

A number of States have set up small and large sized seefarms but most of them do not seem to be working effectively for the production of seeds. It is essential that a farm by farm review is undertaken by each concerned State so as to optimise the utilisation of land and other resources for maximising production of quality seeds. ☐☐☐

Monsoon still gambles with our food

Arabinda Ghose

The recent drought in India has been one of the worst during the century and latest estimates about foodgrains production show that there is going to be a fall of seven to ten per cent in 1987-88 from the 144 million tonnes produced in 1986-87, says the author while taking stock of the situation. In order to face the situation boldly, a Task Force set up for Planning Commission by the Prime Minister has chalked out an action plan which has set a food production target of 166 million tonnes for 1988-89. Indian agriculture can stage a great come back in foodgrain production in future, provided the monsoon is kind, feels the author.

THE CENTURY'S WORST DROUGHT that affected large parts of the country last year, has drastically affected the production of foodgrains. Latest estimates for 1987-88 show that there is going to be a fall of seven to ten per cent from the 144 million tonnes produced in 1986-87. This means, the country can expect a harvest of 130 million tonnes to 134 million tonnes only during 1987-88.

Severe impact

Apart from the severe impact it will have on the economy of the country, as delineated in the economic survey and also in the Finance Minister's budget speech recently, the shortfall in production of foodgrains will cause a strain on the total availability of foodgrains in the country. It is true that the huge stocks of 29 million tonnes on July 1, 1987 have stood us in good stead during1987-88. But understandably, urgent measures are called for in order to substantially increase foodgrains production in 1988-89 and the following year which will be the last year of the current seventh five year plan. These measures have to be taken so that the country can produce 225 million tonnes or so a year by the turn of the century to meet the demand of nearly 100 crore people then.

The Task Force

The Prime Minister, Mr. Rajiv Gandhi, therefore, set up a Task Force of the Planning Commission to draw up a plan on a crash basis which would result in significant increase in the production in the next two years. This was to ensure that there is not much of a strain on the foodgrains availability in the country in 1988-89 and 1989-90, as the buffer stocks will be depleted considerably during this period.

The task force under the Chairmanship of Prof. Y.K. Alagh, Member (Agriculture), Planning Commission drew up an action plan which was approved in New Delhi at a meeting of the Senior Officers of the Central Government and State Governments. The officers of the Union Ministries of Agriculture and Water Resources from the Centre and the Agricultural Production Commissioners from 14 selected states accompanied by the Agriculture and Irrigation Secretaries attended the meeting.

Action plan

The action plan approved at this meeting has set a target of producing 166 million tonnes of foodgrains in 1988-89 and 175 million tonnes the next year, which is the terminal year of the seventh five year Plan. Five crops have been identified for the action plan. These are, rice, wheat, maize, gram and arhar.

According to the Action Plan, concerted efforts will be made in 169 districts in 14 selected states for raising production through a strategy of providing the inputs and monitoring the progress of this programme constantly. A few more districts will be added later.

These 14 states are: Andhra Pradesh, Assam, Bihar, Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Orissa, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh and West Bengal.

The menace

Although such strategies have been executed in the past and the green revolution itself is the result of such planning, the present action plan goes a little deeper

into certain problems that had received somewhat less attention in the past. One of these is to control weeds in fields. Growers of wheat are aware that the weed known as phalaris minor, which looks almost like wheat plants, causes considerable damage to the crop by vying for the irrigation and fertilisers applied for the crop. In paddy also, this menace is encountered.

It was perhaps fortuitous that the Finance Minister Shri Narayan Datt Tiwari's budget proposals gave wide concessions for pesticides and weedicides. This will considerably bring down the prices of these two vital inputs in farming. The reduction in the price of urea too by more than Rs. 8 a bag of 50 kilograms, announced by the Finance Minister, comes at an opportune time because farmers will start purchasing the fertilisers for the kharif crops as soon as they harvest the wheat, mustard, gram and other rabi crops by April.

The Action Plan also includes a provision for additional assistance to the states to complete certain major and medium irrigation projects by 1988-89 so that irrigation facilities become available in the following year. At the meeting it was decided that six lakh shallow tube-wells should be installed every year in six states-Uttar Pradesh, Bihar, West Bengal, Assam, Orissa and Andhra Pradesh. These are expected to irrigate an additional 10 to 12 lakh hectares by the next year.

At the meeting the states have agreed that fertiliser consumption should be increased in order to raise grain output. It was decided that the plant nutrients would be stocked deep in the interior so that they are easily available to the farmers. The Centre has decided to underwrite the operation of these stocks, by meeting the cost of stocking as well as the carrying costs for these additional quantities of fertilisers.

It was also agreed that the area under high yielding varieties of seed should be increased and stocking of seeds too should take place in a manner similar to that for the fertilisers.

Is it feasible ?

The question that arises in this connection is whether it is feasible to raise the production of foodgrains in 1988-89 to 166 million tonnes from the 130 to 134 million tonnes expected this year, and to raise that production to 175 million tonnes the following year.

One might recall in this connection that twice in the past eight years, Indian agriculture had demonstrated its resilience by bouncing back to record harvesting of foodgrains after steep fall because of drought. For example, in 1979-80, the production fell to 109.70 million tonnes from record of 131.90 million tonnes the previous year because of the very severe drought. Yet the very next year, 1980-81, saw India harvest 129.59 million tonnes, a jump of almost 20 million tonnes in just one year. Similarly, the production in 1982-83 was again low, 129.52 million tonnes, because of drought. However, in the very next year 1983-84, production rose to 152.37 million tonnes, an increase of almost 23 million tonnes.

Be kind monsoon !

As one might guess, good monsoons were the reasons for such recoveries. So if the monsoon is kind this year, action plan might bring in this anticipated harvest of 166 million tonnes.

There is yet another factor that makes one optimistic about the action plan. There has been a steady increase in the consumption of fertilisers in the country. In 1983-84, the year when the harvest was the record 152.37 million tonnes, the consumption was of the order of 77 lakh tonnes of fertilisers in terms of nutrients. In 1988-89, this figure will go up to about 95 lakh tonnes. Since one tonne of fertiliser will give an additional 8 to 10 tonnes of grains, the increase in fertiliser consumption will have a corresponding impact on foodgrains production. Besides, water management as also supply of pesticides and weedicides at concessional rates should contribute to this massive effort.

Indian agriculture, which staged the green revolution two decades ago, is again on the crossroads. Will the failure of the monsoon again put the country in difficulties or will the efforts being launched from this year, will take the country out of the woods ? Given a good monsoon, there is no reason why the farmers will fail the country, particularly when the entire country will be geared to make a resounding success of Indian agriculture once again. ☐☐

(Courtesy: Spotlight, AIR)

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knowledge, a broad mind, self-discipline and a great sense of responsibility, which are the essential qualities for leadership. Hence, before action, he should always think of the good of himself as well as of others in the group.

Not only this but 'would-be leaders' should be given training in sincerity, dedication, humility, selfless service and a respect for truth. They should be made to realise that if freedom is a privilege, it is also a continuing responsibility. They should be made to understand thoroughly well that freedom demands not so much enjoyment or indulgence as contribution.

While planning to educate people for leadership, one should bear in mind that the whole structure of education will have to be reorientated. It should provide training for character, improvement of practical and vocational efficiency, development of artistic and cultural interests, etc.

The spirit of co-operation must be emphasised. Our youth should be given special training in self-discipline, tolerance, open-mindedness, large-heartedness and patriotism. They should think of a world peace movement, universal brotherhood, united world, discipline for peace and education for humanity.

BOOK REVIEW

INDIAN ECONOMY : EMERGING PERSPECTIVES BY Ramakrishna Bajaj published by Allied Publisher Private Limited. First published: 1986; Pages xvii + 194 Price Rs. 125.00.

The India economy has always been on the move and is undergoing changes continously. These changes—qualitative and/or quantitative become more noticeable when there is any deviation from the norm. The author, who is a well known figure in the Indian industry and trade has clearly brought out how an emerging economic scenario poses both a challenge and an opportunity to Indian business. The book throws light on the different facets of the Indian economy in the national and the international context. This has been made possible because of the author's close asssociation with the country's policy makers, planners, administrators, economists, bankers and leaders of the Indian industry and trade, in his capacity as the FICCI president (and thus a spokesman of the Indian business) during 1984/85.

It is a matter of rare honour that the foreword of the book has been written by the then Vice-President, Shri Venkataraman. The book is divided into five parts. Part I tries to give a glimpse of the activities during the year 1984/85. However, it is not clear as to what type of round-up the author wants to give-political, economic, social or some blend of all. In fact, it is felt that this section could have been abridged if not avoided completely as it pays more attention to the various activities of FICCI including the meetings, functions and seminars held.

The challenges to the Indian economy in the field of industry, agriculture and infrastructure form the crux of section two. The various policy modifications suggested for the public and the private sector in order to remove infrastructural deficiencies/constraints thus accelarating industrial growth seem rather feasible, pragmatic and useful. The suggestion to involve the private enterprise to make up deficiencies is a welcome one. The author has emphasised that the need of the hour is to evolve a sound wage policy linking wages with productivity and introducting measures to encourage efficiency and penalise inefficiency. This is an idea often repeated but seldom implemented. The suggestions given in the chapter on the information gap between the industry and the academia are sound and if implemented can surely go a long way in the development and absorbtion of technology.

We are then led to the section on trade and consumer protection wherein the author is understood to have well recognised the need for a new trade policy framework in consonance with the requirements of higher producation, greater competition and accelerated growth as envisaged in the Government's new economic policy. The measures necessary to streamline the trading operations and to satisfy the consumer have been dealt with rather effectively.

Section four looks at India's external commercial links with major trading partners. It has been clearly brough out that cooperation among the developing countries is very essential for industrialisation and solving the balance of payment problems.

The social commitment of business in nation-building tasks and community welfare form the backbone of the last section. The author has highlighted the common impediments to national integration, viz., communalism, regionalism and linguism. The extensive involvement of business houses in rural development makes an interesting reading. The suggestion regarding the formation of a group consisting of a wide cross section of representatives to coordinate the activities of the different agencies involved in rural development is a constructive one and worth implementing.

The book is simple, easily understandable and good for general reading. However, if one is interested in specific details, then it is best to look elsewhere. Probably abridging Section I, avoiding certain details about FICCI in other sections and also the appendices (giving the important FICCI and other events and the thanks-giving resolution extracts from observations) would impart a considerable degree of crispness to the analysis.

The author has no doubt, a clear and pragmatic approach in finding a solution to the role the Government, the private corporate sector and the business have to perform to make the new economic policy a success.

Urvashi Sadhwani

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in the absence of proper follow up activities and material support for post-literacy interest and involvement. This scheme has been reviewed and new policies laid down in the new Policy on Education. Administrative structure in States and Union Territories is being strengthened. At present 23 States/U.T.S are receiving financial assistance under this scheme.

Alternative areas

For coordinating the activities in adult education between Centre and State Governments, the National Board of Adult Education was set up in 1970, but the new Policy provides for alternative areas now in place of National Board. The Directorate of Adult Education that came up in 1970 provides technical and academic support to the programme. In 1976 State resources centres were set up to give support to non-formal education which includes adult education.

Over a period of 30 years there have been some significant lessons and achievements, one of them being the recognition of the role of different agencies in formal and informal adult education. Universities and colleges have made adult and continuing education a discipline. Motivation of women and their participation has ever been on the increase. Coverage of Scheduled Castes and Scheduled Tribes have exceeded the targets. Problem areas have been identified and remedial measures planned and formulated. A systematic adult education campaign linked with poverty alleviation, national unity, environment conservation, cultural heritage, maternal and child health, small family norm and the like is perhaps to be taken on a large scale involving teachers, students, youth, voluntary agencies, employers and political parties. Role of media in all these activities is vital as the reach of media is now more than 90 per cent in some cases like that of radio and television. ☐☐

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Government will however, take special steps to cater to the needs of women, rural and tribal students and the deprived sections of society. Appropriate programmes will also be started for the handicapped.

5.20 Graduates of vocational courses will be given opportunities, under predetermined conditions, for professional growth, career improvement and lateral entry into courses of general, technical and professional education through appropriate bridge courses.

5.21 Non-formal, flexible and need-based vocational programmes will also be made available to neoliterates, youth who have completed primary education, school drop-outs, persons engaged in work and unemployed or partially employed persons. Special attention in this regard will be given to women.

5.22 Tertiary level courses will be organised for the young who graduate from the higher secondary courses of the academic stream and may also require vocational courses.

5.23 It is proposed that vocational courses cover 10 per cent of higher secondary courses of the academic stream and may also require vocational courses.

It is proposed that vocational courses cover 10 per cent of higher secondary students by 1990 and 25 per cent by 1995. Steps will be taken to see that a substantial majority of the products of vocational courses are employed or become self-employed Review of the courses offered would be regularly undertaken. Government will also review its recruitment policy to encourage diversification at the secondary level. ☐☐

(Contd from page 14)

numerous commissions and committees have gone into it. In the post-Independence period the Radhakrishnan Commission (1948) the Mudaliar Commission (1953) and the Kothari Commission (1966) made strong recommendations in favour of vocationalisation. But it was only in 1976 that a vocationalisation framework was prepared by NCERT and accepted by the States. Even before the proamme could catch on, the National Development Council in 1979 transferred this centrally sponsored scheme to the States sector. This represented a crushing blow and the scheme did not recover from it.

Centre's responsibility

The New Education Policy, fully recognising the States' inability to raise the necessary resources for vocationalisation, casts a major responsibility on the Centre to coordinate the programme for vocationalisation and fund it substantially. Even so funds of the requisite order may not be forthcoming because of the overall resource constraints made worse by the unprecedented drought of 1987. All the same, the vocationalisation programme can make a useful start in the coming academic year. ☐☐

(Courtesy Spotlight, AIR)

Railways 7th Five-Year Plan target

Railway's 7th Five Year Plan envisaged 340 million tonnes of originating traffic in the terminal year of the plan with an outlay of Rs. 12334 crores. During the Plan period it is proposed to acquire 90,000 wagons (in terms of 4 wheelers), 6970 coaches, 950 electric multiple units, and 1350 diesel and electric locomotives It is also proposed to do about 20000 kms. of track renewal and about 3400 route kms. of railways electrification.

During the first three years of the 7th Five Year Plan, a total allocation of Rs. 8000 crores has been made to the Railways by the Planning Commission. ☐

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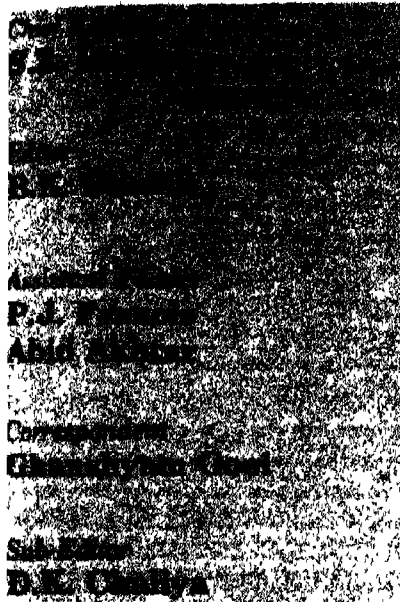
Our contributors :

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Building a strong youth force for constructive work

Mrs. Margaret Alva

An unprecedented high budget of Rs. 200 crore in the VII Plan and the Prime Minister's taking over of the Presidentship of the Sports Authority of India have given a boost to sports in the country, asserts the Minister for Sports and Youth Affairs, Smt. Alva in this exclusive interview with our Special Correspondent, G.S. Muhay. Enumerating different programmes and schemes, both launched and proposed, she lays special emphasis on the potential and energy of the youth in the country. She feels, their participation in the country's development is a must. Their immense energy should be utilised for building a strong youth force for the purpose.

Q. Mrs. Alva, being incharge of Youth Services and Sports you are better placed to spell out what are the National Youth Services and what are their objectives ?

Ans. There has been an increasing awareness that the people of the country should be looked upon as valuable resource—indeed the most valuable resource—and that our growth process should be based on the integrated development of the citizen, beginning with childhood and going through life. It is therefore considered imperative that all relevant instruments and agencies contributing to or responsible for, this growth must be integrated. It is in pursuance of this idea that the new Ministry of Human Resource Development was created on 26th September, 1985. This Ministry has five Departments, namely, Department of Education, Department of Culture, Department of Arts, Department of Youth Affairs and Sports and Department of Women and Child Development.

The aim of the Ministry of Human Resource Development is the all-round development of the human being. To this end it seeks to integrate the different relevant activities of human development. The process is not merely one of coordination, but of real integration, so that all components are woven into a single, harmonious programme.

Young people today are seeking justice and opportunity. They want to be involved in creating a new social order. Our programmes aim at developing the personality of the youth as well as at enabling them to be useful citizens by motivating them and providing opportunities for social involvement.

Q. To what extent the objective of the National Youth Services has been achieved ?

Ans. Ours is a vast country with 33 per cent of the population in the age group of 15-35 years. This is our target group. Obviously, this newly created Department has not as yet been able to reach even a fraction of this population. But modest beginnings have been made to involve the youth from the rural areas and the urban centres, from the universities. National Integration Camps, interstate visits, special work camps, literacy campaigns, seminars, cultural festivals, afforestation and wasteland development projects have all been launched by and for youth. These activities are providing opportunities for participation in community development programmes besides providing an exposure to the various cultural traditions of the country and appreciation of the challenges of development. I admit that a lot more needs to be done. But what has been achieved is praiseworthy.

We have two major Youth Organisations today:

(1) The Nehru Yuva Kendra Sangathan for rural non-student youth. The NYK Sangathan is an autonomous organisation launched by the Government and today it implements programmes in nearly 300 districts of the country. It will cover all the districts by 1990. Each district has a Youth Coordinator with 5 national service volunteers and an annual budget of 2.25 lakh. Its programmes aim at integrating youth into development through training and employment generation activities, leadership training and motivation programmes. The District Kendra operates through a chain of Youth Clubs which it organises.

(2) The N.S.S. works through student volunteers in universities and colleges. Their number today stands at about 8.9 lakh. Efforts are being made to reach an enrolment figure of one million students under N.S.S. by 1989-90. The programmes of the N.S.S. involve integration, leadership and work camps, literacy and immunisation campaigns, hygiene, nutrition and first aid training etc.

Q. There are three Netaji Subhash National Institutes for promotion of sports in the country. They are located in Patiala, Bangalore and Calcutta. Have these Institutes added to excellence in our sports ?

Ans. Sports Authority of India (SAI) which is today the Apex Sports Body of the country is in the process of setting up 4 Regional Centres—the West Centre at Gandhinagar with a Sub-Centre at Aurangabad; the South Centre at Bangalore (which is being developed as a "Centre of Excellence"); the East Centre at Calcutta; the North Centre presently functions at Patiala and the Central Centre presently functions at Delhi. A high altitude training centre is coming up at Shimla, a Yatching Centre at Bombay and a Rowing Academy at Alleppey. These will help to broad base the sports facilites for training of our national teams/sports persons under international level facilities and expert trainers.

Besides funding these Centres, the Central Government has also been providing assistance for creation and broadbasing of infrastructure in different parts of the country.

For creation of sports infrastructure under the scheme "Grants to Sports Councils etc." the following grants have been released:

	(Rs. in crores)
1984-85	1.47
1985-86	2.14
1986-87	14.79
1987-88	14.35

For creating infrastructure in universities and colleges under the National Sports Organisation scheme, the following amounts have been released as grants through the UGC:

	(Rs. in crores)
1985-86	0.51
1986-87	1.94
1987-88	3.50

Synthetic Tracks and Artificial Turf costing around Rs. 314 lakh have been imported in the last 3 years.

Q. What is the contribution especially of National Institute of Sports, Patiala in the development of national and international sports in the country ?

Ans. NIS, Patiala which was our first National Institute of Sports was essentially a teaching Institute which conducts a Master's Degree Course ([illegible] months), Regular Course (10 months), Certificate Course (6 weeks); and Refresher Courses for in-service Coaches. Courses are conducted in athletics, badminton, basketball, hockey, hand-ball, judo, table tennis, swimming, volleyball, wrestling and weightlifting. Regular Courses in a few disciplines are now conducted at Bangalore and Calcutta as well. NIS has so far trained more than 7000 coaches including 250 coaches from 14 countries. A number of coaches working at NIS have been trained in the USSR and the GDR. NIS is also recognised by the International Olympic Committee and International Athletic Federation to conduct international courses in athletics.

Apart from producing coaches, NIS has also been responsible for training top sportspersons for international events by conducting/supervising coaching camps for the preparation of Indian teams for participation in international events. This function will now be performed by the newly constituted Teams Wing of SAI.

NIS operates university field stations and sports hostels established 25 years ago. It has rendered yeoman service in the development of sports in the country. It has also been contributing to the promotion of sports by awarding sports scholarships to students on the basis of their performance in different tournaments. It has also been providing equipment support and technical expertise in the conduct of major sports events.

Q. There is reported to be growing indiscipline in universities and educational institutions. In your opinion what are the causes and how do you think the situation could be improved ?

Ans. Young persons have played an important role in education, art, culture, sports, science, technology and politics and contributed to the development of this country. It is this participation that has to be increased further for harnessing their potential in different fields for building a strong and constructive youth force in India. If they are mobilised and motivated the country's future is assured.

One of the reasons for indiscipline among students is lack of suitable opportunities for youth to participate, in their leisure time, in constructive activities suited to their mental and physical ability. The idealism and energy of youth have to be channelised through various programmes which can involve them. What young people want is involvement—not advice and slogans.

Q. What new schemes you are going to embark upon to divert the youth energy for constructive work ?

Ans. The Government in its new 20-Point Programme has included "New Opportunities for Youth" as Point No. 13. This itself speaks of the importance now attached to youth activities in the country. Given below is the point:

10. New Opportunities for Youth
We Shall :

- Enlarge opportunities for youth in

sports, adventure and cultural activities;
- Promote physical fitness;
- Involve youth on a massive scale in projects of national development such as :
  —the cleaning of the Ganga
  —the conservation and enrichment of the environment
  —mass education.
- Identify outstanding young persons in all fields to encourage and develop their talents;
- Involve youth in promoting national integration, cultural values, secularism and the scientific temper;
- Expand the network of Nehru Yuvak kendras;
- Strengthen the National Service Scheme and the National Cadet Corps;
- Encourage voluntary agencies working for the welfare of rural youth

The New Education Policy underlines the importance of youth programmes such as the National Service Scheme and the National Service Volunteer Scheme as part of the NEP.

The budget for youth programmes has risen from Rs. 12 crores in the 6th Five Year Plan to Rs. 100 crores in the 7th Five Year Plan, which is a clear indication of the new thrust the Government is giving to youth programmes.

A National Youth Advisory Committee has been set up with the Minister of State in charge of Youth Affairs and Sports as its Chairperson, to advise and review programmes for youth.

The Scheme for Training of Youth provides opportunities for rural youth for training in various vocations including agricultural and related fields. Training institutions where useful training can be imparted are identified by the Department and the courses are totally funded by us.

Exhibitions for youth are organised to promote awareness of developmental activities and the varied aspects of Indian life and culture etc.

Assistance is provided to youth clubs to help development of grass root youth organisations. Assistance to youth movements like the Bharath Scouts & Guides and Young Farmers Organisation, has been stepped up. National integration camps in various parts of the country are held through voluntary youth organisations in which the youth are involved in creation of permanent coummunity assets. Some of these camps involve around 1000 participants. These camps prove useful to the community besides helping to inspire our youth for future action. Fifty such camps are planned for 1988-89, which will bring rural and urban students and non-student youth together.

The National Service Volunteer Scheme provides opportunities to educated youth for social service on a whole time basis for a specific period on a monthly stipend of Rs. 300 and a travelling allowance of Rs. 150. During the year 1988-89 it is expected that nearly 3000 youth would benefit from this scheme.

Adventure activities have been diversified to add handgliding and parasailing, to the existing programmes of mountain climbing, trekking, cycle tours and river-rafting.

The Youth Hostel Programme has been expanded with a target of 60 hostels for the VII Plan period. A National Advisory Committee for Youth Hostels has been constituted.

The Inter-University Youth Festival has been revived in 1985 after a gap of 25 years. Five Regional Festivals are organised with the winning groups participating in the National Festival.

The National Youth Award Scheme has given a big boost to youth work in India. The Youth Awards are presented annually by the Prime Minister to outstanding young persons and a Youth Organisation in the field of community work.

The National Youth Day is now celebrated throughout the country on 12th January which is the birthday of Swami Vivekananda, with the Nation Youth Week following. This year many Indian missions abroad also organised suitable programmes to mark the occasion.

A National Yoth Emblem was adopted during the International Youth Year, 1985, the Emblem itself being selected through a national competition for youth.

Q. India's performance in the recent international sports meets has not been impressive. For example, hockey, football, cricket but for athletics. What the Government proposes to do to improve the position ?

Ans: While it is true our performance in hockey and football has not been good in recent years, the performance in other disciplines like wrestling, archery, billiards/snooker, tennis, cricket, badminton and chess, has been encouraging There has been improvement in our standard in rowing, weightlifting and boxing. This has been achieved through systematic coaching and training, provision of modern infrastructure and equipment and financial assistance for national tournaments and international exposure.

Long term plans for 13 priority disciplines for the 1990 Asian Games have been prepared and

coaching camps with scientific/psychological/ medical back up have already started for the preparation of our sportspersons for these games. The newly created TEAMS Wing of the Sports Authority of India has started functioning. Long term coaching plans for preparation for Asian Games 1990 in 12 priority disciplines have been approved. The services of foreign coaches in the selected disciplines have been made available to the National Sports Federations. A Committee under the chairmanship of Vice-Chairperson, Governing Body of SAI has been constituted for monitoring preparation of national teams for the 1990 Asiad. Full use of the scientists and the facilities of the Sports Science Faculty at NIS Patiala is being made for the training of sports persons. The new Guidelines have liberalised the diet allowance, TA/DA and equipment support.

Special awards ranging from Rs. 50 thousand to Rs. 5 lakh to sportspersons winning medals in specified international sports events of specified categories and awards ranging from Rs. 75 thousand to Rs. 20 lakhs to teams winning such medals have been introduced as an incentive to excellence.

Rural Sports Tournaments for rural youth are held every year at the block, district, division, state and national levels. About 20 lakh youth participate every year. The State Governments are assisted financially for holding the tournaments. The National level tournaments are organised by SAI. Expenditure incurred in 1986-87 was Rs. 22.70 lakh and in 1987-88 Rs. 29.00 lakh.

The National Sports Championship for Women which was first organised in 1975 is now an important event in the sports calender every year. Government gives financial assistance for holding women's tournaments at the block, district, division and state level. To encourage sports among women, scholarships are awarded to sportswomen on the basis of their performance in Senior National Championships.

It is now for the Federations and the sportspersons to show dedication and work together to improve their performance and show results.

Q. **What new schemes you are going to take up this year?**

Ans. The last three years have seen many changes in our approach to sports development. Besides the jump in the sports budget from Rs. 13 crores in the VI Plan to Rs. 200 crores in the VII Plan, the amalgamation of the NSNIS and the SAI on 1st May, 1987 with the Prime Minister taking over the Presidentship of the amalgamated SAI, has given a new status and a new impetus to sports in the country.

A National Sports Policy has been adopted with emphasis on broadbasing of sports participation and excellent development in competitive sports. To achieve this several new programmes have been launched and schemes announced. Besides the ones already mentioned above, we now have some novel schemes starting with children:

Scouting and nurturing of young sports talents through the National Sports Talent Contest Scheme in the under 12 age group has been launched through the Sports Authority of India (SAI). SAI has adopted 63 schools including 10 Navodaya Vidyalayas for training these children, under experts at Government cost.

Special Areas Games Scheme launched by Sports Authority of India aims at tapping natural talent in selected sports and games available in remote and tribal areas of the country and training them systematically/scientifically for excellence. Under the scheme 28 archers were selected for long term training out of which 4 found a place in the Indian team for participation in Asian Archery Championship. In order to tap natural talent from coastal areas and islands for modern water sports, we are setting up water sports centres at Monroe Islands at Alleppey (Kerala) and Sippighat at Port Blair (Andamans) Modern acquatic sports such as Kayaking and Canoeing have been introduced in these water sports centres. In the National Games 1987, the trainees of these two centres won 4 gold, 3 silver and 1 bronze medals. Similar efforts have been launched in Ladakh for long distance running, in north Kanara for athletics, in Ranchi for hockey and in the North-East for Contact Sports and football.

SAI has introduced a scheme to revive and popularise indigenous games in the country by giving assistance of Rs. 25000 to a State for conducting a tournament in any selected indigenous game. In addition SAI has organised two festivals of indigenous games in the North-East in the last two years.

The scheme for development of playfields with equipment support @ Rs 1.00 lakh for one secondary/middle school in each development block with the objective of protecting the available playfields, laying of athletic tracks and equipment support in respect of games popular in the area has been announced. The school will function as the nodal point for the organisation of coaching camps and inter-school competitions in the block.

To broadbase sports activities in identified geographical areas a new scheme to be called the Sports Promotion Development Area (SPDA) has been launched. For each group of 80-100 development blocks, a sports complex costing approximately Rs. 50 lakh on matching basis is proposed to be set up. Selected sportspersons in 2-3 disciplines popular in the area would be accommodated in the dormitory accommodation to be created as a part of the Sports Complex so that their intensive coaching requirements can be taken care of. The proposed complex would have a stadium for outdoor games like football, hockey, volleyball and

(Contd. on page 30)

Achieving excellence in sports

C.P. Bhatia

Sports in India had been a neglected sector for a long time after Independence. The author here highlights India's achievements in the field of sports and discusses future plans of the Sports Authority of India to promote sports, achieve excellence and prepare sportsmen and athletes for international events, especially for the coming Olympics in Seoul. He lauds the schemes like National Sports Talent Contest but feels that sports in India need to be broad-based.

SPORTS AUTHORITY OF INDIA was set up in February, 1984 with twin objectives of creating sports & fitness consciousness in the country and to scout talent and nurture the same. There is no denying the fact that there is certainly a need to revamp sports culture in our country. Today our education is nothing more than mere academics. Sports and adventure activities do not have rightful place in the curriculum for school and college children. That is why except in hockey and in one or two other disciplines, India, notwithstanding its size and population has not been able to make a mark in international sports. It is, in view, of this that one of the major tasks of the Sports Authority of India was to create sports consciousness in the minds of the administrators, parents and the children. In the last 3-4 years, there has been ample proof that the Sports Authority of India has succeeded in its basic task. Today, there is virtually, a revolution of rising expectations from the children and the public in general for creating more and more sports infrastructure so that everyone can participate in games and sports of their choice.

Roots

Victors come out of participants. It is, therefore, essential for any country to broad base sports at grass roots level. Government of India has already exhorted in The New Education Policy that sports should become an essential part of school curriculum. It would take sometime before this lofty ideal is achieved because more than 50% of our schools in the villages and in small towns have only one or two rooms, leave alone, their having requisite number of play-fields and sports infrastructure. Unless we can provide sports facilities to the children to prove their proficiency we cannot test their ability during time of test. To make sports an integral part of curriculum, we therefore, have to create sports infrastructure at grass roots level. In this direction Sports Authority of India has already taken the first step in promoting sports in rural schools by providing them financial assistance and also appointing a Physical Training Instructor to promote sports after school hours. In the years to come, it is hoped that every Development Block in the country would have requisite sports infrastructure where children belonging to that school and from the neighbourhood community would be able to play.

One of the reasons why India has not been doing well in the international sports arena is that we never seriously scouted talent at the optimum age level and nurtured it over a protracted period of time, before launching them into international competition. "Catch them young", remained a cliche for a very long time in our country. It was soon after the formation of the Sports Authority of India, that a very bold and innovative scheme was launched by the Hon'ble Prime Minister Shri Rajiv Gandhi (14 November, 1985) to scout, nurture and shape young talent in the country.

Sport consciousness

The Scheme was launched with two main objectives, viz, to start a movement in the country to promote sports consciousness, and to create a greater awareness for sport among parents, educationsits and young children, so that participation in sports, becomes an essential requirement for every chiid exposed to integrated development of his personality. A second objective was to spot talent in young children at the optimum age level for each game, and thereby "involve them young", and subsequently coach them and develop medal-winning prospects for the future.

Though the expectations of the people since Asiad 82 have risen, sports standards in our country have nose-dived. One of the major causes was that we did not have any specific scheme for scouting talent, nurturing it, for a period of five to six years, before our players were asked to participate in Asiad, Commonwealth and Olympic Games.

Spotting the talent

On the advice of Sports luminaries, sports promoters and sports administrators, it was decided to scout talent in 10 disciplines namely—Athletics, Gymnastics, Swimming, Football, Hockey Basketball, Volleyball, Badminton, Table-Tennis & Wrestling. This was done by holding contests to the extent possible at Taluk/Block level, and thereafter at District and State level, and finally at the national level. Success of the scheme would of course ultimately lie in its correct implementation and fair selection of the children at Taluk and District level. If naked favourtism was shown at Block and Taluk level, while scouting for talent, to that degree, the objective of the scheme was likely to be diluted, and would amount to non-achievement of the targets laid down.

Children are scouted for between the age of 9 and 12 years, for gymanstics and swimming, while for the remaining disciplines they can compete, even upto 12 years of age. Those who bloom later, are covered by a scheme that has a provision for taking children upto 14 years. One of the reasons for poor performances by Indian sportspersons, was that children are forced to cheat about their age. Some of the School-children who had crossed their teens, were kept in the schools, even after repeated failures in examinations and were made to participate in sub-junior and junior tournaments, with a view to winning laurels for their institutions. This resulted in very little improvement in their performance, when the children grew up and participated in the open competitions at national and international level. To avoid perpetuating this cancerous growth in Indian sports, the Sports Authority of India, made it their serious business to carry out very strict age verification, at the time of scouting for talent. All the participants in the National Sports Talent Contest Scheme, are subjected to medical examination by a panel of doctors and an Age Verification Board. In case of suspicion children are even subjected to X. Ray's, to determine their bone age by ascertaining fusion of their long bones of the arms, with sockets of hands and elobow. In the last 3 years, SAI has been able to make a small beginning in this regard.

N.S.T.C

The scheme is becoming popular as is evident from the figures. In the first year, only 25 States and UTs. participated in the NSTC. It was learnt that about 343 districts conducted contests at district level. In 1987, more than 400 districts of 29 States & UTs, conducted contests at district level. In 1985, only 1473 children participated in the National Contest, while in 1987, the figure was nearly double. This goes to prove that our first objective of creating sports consciousness and broad-basing sports, is being achieved to a great extent.

Adopting the schools

In order to ensure proper nurturing of scouted talent, SAI is to adopt 100 schools, during 7th Five Year Plan. So far, 63 schools (including 10 Navodaya Vidyalayas) have already been adopted by the Sports Authority of India. While adopting the schools, SAI keeps in mind, that the School has a good academic reputation, a good sports culture, and either has sufficient sports infrastructure available, or has adequate space for developing required sports infrastructure. The school has to be either fully residential, or should have facilities for boarding & lodging for the children. The schools are normally selected on the recommendations of the State Governments, and they are asked to reserve 10% of their annual intake for these budding sportsmen without holding any other examinations for them.

Adopted schools are provided with upto 5 coaches who give concerted, continuous, and scientific training to these budding young players. Every school is given an Athletics Coach, as it is SAI's considered opinion that without athleticism, no game/sport can be developed. In addition, schools are given four more coaches of their choice, depending on the availability of sports infrastructure. Needless to say, that as far as possible, children of five disciplines only are admitted in a particular school. These coaches are asked to promote sports consciousness among the school children, by motivating the students to participate in sports and games. along with these selected young children. The SAI coaches are required to develop sports participation not for mere recreation purposes but for sports excellence. Children are taught "To Play To Win", by fair means.

In addition to training in the schools, these selected children are also gathered at one place during summer/winter vacations, where they are put to very intensive and extensive coaching, as well as competitions.

It is rather premature to assess this scheme in its 3 years of operation, as the first two years of training are totally a development training, where main aim is to develop physique and to psychologically motivate the sportsmen to reach for excellence. Even at this early stage, there has been a very positive trend, indicating that, this scheme has achieved its objective to a great extent, in the first two years of its existence. Some of the random examples given below, which are not exhaustive, illustrate the point.

Badminton

Manish Parinja of the Army Public School of Delhi, Ankur Chandokh, Kunal Khankaria and Master Tiwari. alongwith a few more children, showed excellence at State and National level, in the Badminton Championships, held recently.

Gymnastics

Miss. Sumana, Pratima, Kaberi, Manjri Bakre, Kekoli Sarkar from Motilal Nehru School of Sports, Rai, gave excellent performances, winning at the National Games, held at Trivandrum.

Wrestling

Shivalik Public School, Chandigarh, is virtually becoming the centre of excellence for wrestling. During

the 8th Mini National Championship, held at Durg, 6 wrestlers from this school, have won gold medals in their respective weight-categories.

Table Tennis

In the recently held National Table Tennis Championship at Delhi, Kum. B. Bhuvaneswari, from Sharda Vidyalaya (Salem), Tamil Nadu, won a Gold Medal and was the best player in her age group. Ripu Daman, Jupi Borthankur, Anuradha and Shimray, also were placed very high in their respective age groups, and won either first or second prizes.

Coaching

Our coaches are awarded a diploma, after receiving training for about 10 months. This has been found inadequate for coaches asked to develop young talent, for competition at international level. It has, therefore, been decided, to give on the job training to the coaches, by holding special clincis and Orientation Camps for them, so that they are given additional education in sports medicine and sports sciences, and are also updated from time to time, in the latest coaching techniques. The performance of the children, is being monitored by formulating very comprehensive proformas, which are computerised. These monitoring proformas are also utilised in the training of the children, when taking suitable corrective measures.

Realistic assessment

Though it is yet too early, to give any credit or to do any realistic assessment of this scheme, it has been accepted by all that it is bold in concept and should yield good results in the years to come, if it is implemented forcefully and diligently. Of course we know that every child discovered cannot be converted into a world champion. It is quite likely, that some of the children may no longer remain motivated. This may be due to various personal or socio-economic reasons. However, it is presumed that at least 10% of the 'scouted' children will be able to participate in International Tournaments from 1992 onwards, when they have completed about 6 to 7 years of scientific training. So, SAI's Scheme is only the beginning of a process where children have been discovered while still young. In four to five years' time we should be able to recognize the champions among them, who are destined to put India on the sportsmap of the world.

Another scheme

Sports Authority of India conceived another novel scheme to try and tap the talent in various tribal areas in different states. It was felt that people in different regions of the country have certain natural qualities which can help them to excel in some sports. These talented children are picked up from various rural festivals and are given training in the local environment. So far, SAI has been able to pick up talented children from Rajasthan, Meghalaya, Ladhakh and Arunachal Pradesh and they are being given training in Archery. Talent of water sports from back-waters of Kerala, and long distance running talent of Sidis of Karnataka and Gujarat have also been tapped. In this scheme infrastructure is also being created in various remote areas and the selected children are given concerted training under very modern conditions and with modern gadgets.

Good coaches

Sports Authority of India has also taken note of and is trying to improve the quality of coaches being produced from our premier institution, i.e., NS NIS, Patiala, and its other centres at Bangalore and Calcutta. There is no doubt that good coaches cannot be produced in 10 months. The debate is already going on, to increase the length of the course for the coaches and also to provide them sufficient inputs of sports medicines and sports sciences. Sports Authority of India is also giving equal importance to physical education and efforts are afoot to ensure that all schools in the country have a Physical Education Teacher on their roll.

Great merger

Government of India decided to merge all sports and Physical Education Institutions with the SAI and this is being considered as a step in the right direction. All Sports Organisations instead of conflicting and competing with each other would now be cooperating and coordinating their efforts to achieve common goal of promotion of sports in the country.

Government of India has also provided sufficient funds, though there is need for more, at the disposal of the Sports Authority of India, for creating sports infrastructure, scouting of talent and nurturing the same with common objective of broad-basing sports in the country as well as converting young children into champions of tommorrow. □□□

Guideline for examination reforms prepared

Detailed guidelines have been prepared by the University Grants Commission and the National Council for Educational Research & Training (NCERT) for the introduction of examination reforms at the university and school levels. The proposed measures would involve the elimination of of excessive element of chance and subjectivity; de-emphasis of memorisation; continuous and comprehensive evaluation spread over a total span of instructional time; effective use of the evaluation process by teachers, students and parents; improvement in the conduct of examinations; the introduction of concomitant changes in the instructional materials and methodologies; introduction of semester system from the secondary stage in a phased manner; and the use of grades in place of marks.

The National Policy of Education, also proposes recasting of the examination system to ensure a method of assessment that is a valid and reliable measure of student development and a powerful instrument for improving teaching and learning. □

India in world sports

Vijay Kaura

In this piece, the author surveys India's performance and achievements in various sports and games at the international level. He feels that 'with the formation of the Sports Ministry, Indian sports are bound to make more progress as there is going to be planned policy to give impetus to sports in the country'. Under the National Talent Hunt Scheme launched by the newly set up Sports Authority of India, the promising youngsters picked up are being given free education and special coaching. 'It is difficult to visualise the results of the scheme at present, but with the passage of time it is bound to produce good results', he expresses confidence.

INDIA'S ACHIEVEMENTS IN THE WORLD of sports ever since it started participating in it and especially after Independence are slightly on the plus side It is rather a mixed one if one tries to compare the rise and fall of its various disciplines with some of those where the Indians have made a name for themselves.

If in one game India is kissing the dust then there are others in which India reached great heights. Though India has not organised the Olympic Games it has hosted a number of world championships in disciplines like table tennis, billiards, hockey, cricket besides having organised pre-olympic tournaments and the Asian Games.

IX Asian Games

The biggest achievement had been the organisation of the IX Asian Games in 1982 which at one time looked like going to some other country. This was more due to the political changes at the Government level than anything else. Since a lot of time had been wasted through unmeaningful deliberations it appeared that the infra-structure required for staging the Asian Games would not be ready in time.

But then with the arrival of the late Mrs. Indira Gandhi back on the Prime Minister's post, things moved in a really fast pace and the world wondered at the way the infra-structure was completed well before time This again was due to the personal interest taken by Mrs. Indira Gandhi who herself had been responsible for giving the green signal to the Indian Olympic Association to bid for it.

Organisation of the IX Asian Games was a big event. One may like to ask: Why ? The reason being that as compared to the Ist Asian Games in Delhi in early 50s a big infrastructure was required and the disciplines to be organised were five times more than those organised during the First Asian Games.

The organisation of the Asian Games was a resounding success and the world came to know about the organisational capacity of India and it people. This also prompted the International Olympic Committee to honour the late Prime Minister with the Olympic Order (gold). Mr. Samaranch, President of the International Olympic Committee, took the pains personally to present the award to Mrs. Indira Gandhi during the 86 th Session of the IOC held in New Delhi in 1983.

In the field of sports

Despite all this, India has not made the progress which it should have and we are still far behind many countries which have made. tremendous progress during this period.

Hockey debacle

There is one game that suffered the most during this period. India had been the Olympic champions ever since it started participating in the Games. That was the time when India had not been partitioned and it ruled supreme in the game of hockey. That was the time when India was invited to play everywhere. The world had been looking forward to India's participation and her hockey players were respected all over. But now a time has come when India has to request for its participation ! There was every possibility of India not participating in the Olympic to be held in Seoul but the International Hockey Federation had been kind enough to allow India to take part in Olympics this year.

But the way things are going it will no longer be possible for India to get an automatic entry into the olympic Hockey. In future India will have to fight it out in the qualifying tournament and the way South Korea and Malaysia are coming up in this game India will really have to fight it out.

The Indian hockey nose-dived in November-December 1986 when after finishing third in the 10th Asian Games in Seoul India finished last in the World Cup held in London In fact, both India and Pakistan finished last in their respective groups and in the play-off for the 11th and 12th position India lost to pakistan and finished 12th amongst the 12 participating teams.

In fact, India's sliding down process started from Mexico Games in 1968 where India finished third. However, the first defeat they suffered was during the Rome Olympics in 1960 where India lost to Pakistan in the final with the match winner coming off the stick of Nasir Bunda.

Before this India had players like Dhyan Chand, Roop Singh, Amir Kumar, Balbir Singh, R.S. Gentle, Kishen-Chand, K.D. Singh 'Babu' and Udham Singh. Dhyan Chand had become a household name not only in West Germany but also in Holland where there is a street named after him in Amsterdam.

Short-lived-glory

India regained the title in 1964 Tokyo Games again to lose it in 1968 in Mexico where India suffered the ignominy of having finished third. After the same position in 1972 India slid further down to seventh position in the Montreal Games. Then came the god-sent opportunity when the American Blocboycotted the 1980 Moscow Olympic Games with the result teams from West Germany, Holland, Australia, Pakistan and England did not participate.

It was a matter of great luck that India, once again regained the Olympic title beating Spain in the final. The way India played in the first half they completely over-ran Spain but in the second half they completely gave in, and, had there been five more minutes Spain would have levelled the score and then beaten India in the extra time as the Indians were panting for breath.

Lack of fitness

India, however, could not maintain the same position four years later in the Los Angeles and despite having had a good team it could finish only fifth. In the World Cup Hockey India's showing had not been very encouraging. Physical fitness had been the greatest concern of the Indian players.

In the 2nd World Cup in Amsterdam India came very close to winning the title but were let down by the stamina. After having defeated pakistan in the semi-finals they took a 2-0 lead against Holland in the final. But Holland came from behind not only to neutralise the margin but win the match on tie-breaker.

The third time in the World Cup proved lucky for India as they won the world title in 1975 in Kuala Lumpur beating Pakistan in the final by the odd goal India failed miserably in Beunos Aires where they finished sixth in 1977 but then at home four years later India went a step ahead finishing fifth. India never had so bad as it had in 1986 where they hit the nadir occupying the 12th position.

In the Asian Games India could win the Asian title only once in 1966 when they got the better of traditional rivals Pakistan by a solitary goal scored by edulient Balbir Singh of the Railways in Bangkok. During the last Asian Games in Seoul India finished third behind South Korea and Pakistan.

Billiards the saving grace

While India kept sliding down in hockey it produced three world champions in Billiards. The first of the world billiard champion was Wilson Jones who won the title for the first time in 1958. Then after a gap of six years Wilson Jones repeated the performance in 1964. Then was born a star on the billiard horizon Michael Ferreira from Bombay had been hitting the headlines and emulated his senior player Wilson Jones' feat in 1977. He became the only Indian player to have won the world title on three occasions. After 1977 Ferreira claimed the title on two more occasions in 1981 and 1983. He could have become the only player in the world to have claimed the fourth world title but his progress was halted by his team-mate Geet Sethi who ultimately won the title in 1985 in New Delhi.

India organised the World Billiard Championship for the first time in Calcutta in 1952. Thereafter the Billiard and Snooker Association of India staged the World Championships in 1981 and 1985 and both times in New Delhi.

These three players— Wilson Jones, Michael Ferreira and Geet Sethi—amongst themselves claimed the world title on six occasions. Besides having won the world title on six occasions the Indian players won the silver medal on four occasions. Geet Sethi, the last of the world Champion is very young and can bring more laurels to the country in future.India has another player in Satish Mohan who has made a mark in the Billiard world.

In tennis too !

If Billiards provided world champions then tennis did not lag behind. Players like Ramanathan Krishnan, Naresh Kumar, Premjit Lal, Jaideep Mukherjea, Vijay Amrithraj and Ramesh Krishnan put India on the world tennis map. Most consistent of them had been Ramanathan Krishnan whose son Remesh Krishnan today is holding the mantle of his father. Ramanathan could have been the only Indian to have won the Wimbledon title but he lost to Chuck Mackinley in the semi-finals.

India reached the Challenge Round of Davis Cup in 1966 and lost to the title holders Australia and then reached the final of the Davis Cup. India had to concede

the final to South Africa as India had been critical of the Apartheid Policy of South Africa and did not want to have link with that country. India entered the Davis Cup final for the third time in 1987 where they lost to Sweden rather miserably after having defeated Australia in the semi-final earlier.

Table tennis

Besides hockey and billiards India organised the World Championships in table tennis. Though India doesn't have a single world beater, it had the honour of hoving organised three World Championships so far. The first of the World Championships was organised in Bombay in 1952 to be followed by the World Championships in Calcutta in 1975. The third time India organised the World Championship was in New Delhi in 1987. Though a make-shift arrangement was made to organise the Bombay World Championships in 1952 but thereafter in Calcutta and New Delhi it was played in the Netaji Subhash Stadium and Indira Gandhi Indoor Stadium in Calcutta and New Delhi respectively.

Football, rise and fall

Football, which enjoyed the patronage of the masses, has become a thing of the past. When India participated in the Olympics for the first time in 1984 no one knew about the potential of the Indian footballers. Indian footballers used to play barefoot and when they landed in London no one gave them any chance and majority of them laughed over their plight.

Indian footballers made a place for themselves in the hearts of the Britishers who at one time had been jeering at them. No doubt the cold underfoot conditions did bother the Indian players but the way they played showed that they were not novice. Immediately after India claimed the Asian Games title beating Iran by a solitary goal during the First Asian Games in New Delhi.

Regiments

Indian football had reached a standard due to the British Regiments that were stationed in India during the British regime. In these Regiments there were many internationals like Compton, Landsbrough, Johnny Walker, Joyner and Tony curtis and the Indian players learnt a lot from them. That standard was maintained even after the British Regiments left India because they had left an impact and it would have taken some time before the impact was lost.

After having a poor display during the Helsinki Games in 1952 the Indian football did pretty well in the Melbourne Games in 1956. The Indian team reached the semi-finals and ultimately finished fourth. Even in the Rome Olympics in 1960 the Indian team did not fare badly. They were pitted against Holland, Peru and France in the Group encounters. They defeated both Peru and France while they lost to Hungary who remained unbeaten in the group and qualified for the quarter-finals which were played on knock out basis. Now the situation is that India doesn't even qualify to play in the Olympics.

India's position in the Asian soccer also is not very rosy. After having won the title in 1951 in New Delhi, India was able to win the Asian Games title only once thereafter in Jakarta in 1962.

Athletics, poor show

In athletics the performances have been few and far between. The Indian athletes are nowhere near the world standard and it had been only on two occasions that the Indian athletes had been able to do something in the Olympic Games. The main cause of India's poor performance in the world of athletics is the poor physique as well as the poor planning on the part of the Amateur Athletic Feberation of India and the Government of India.

Hope

India has been participating in the Olympics for the last 60 years but it has still to win a medal in athletics. However, in the Asian Games India is winning the medals but the supremacy they had earlier is lost to countries like China, Japan and Korea. The most spectacular performance came from the 'Flying Sikh' Milkha Singh, a 'Jawan' in the Indian Army. With his excellent performances he became the most feared competitor before the Rome Games in 1960 and he was a sure medal prospect.

Before reaching Rome Milkha had been on a European tour and participated in a number of European championships where he was able to measure his strength properly. He had beaten Otis Devis of America and stood a close second to Kauffmann of West Germany. Milkha was bubbling with enthusiasm when he reached Rome. He qualified for the final in a nonchallant manner and when the final of the 400 metres started Milkha, who was given the outer lane, had the disadvantage of not being able to see the athletes coming from behind.

Milkha was quite concerned and repeatedly kept looking back which resulted in spoiling his smooth strides. Both Otis Davis and Kauffmann were chasing Milkha Singh. Being in the inner lanes they had the advantage of chasing their target. It was a fantastic race as the first two Otis Davis and Kauffmann returned the sub-45 second time while Milkha who was pipped at the post by Mal Spence also broke the then existing Olympic record while clocking 45.6 seconds. However, Milkha reigned supreme in his pet 400 metres in Asia and was unbeatable so long as he continued to run.

And despair

India also had a fine relay team in the 1600 metres but the weak ness was that besides Milkha there was no other athlete of that calibre. During his time India had athletes like Makhan Singh, Parduman Singh, Balkar Singh and Sri Chand Ram who all belonged to the Indian Army. In fact the Indian Army has given a number of top class athletes to the country. Not only that there had been number of services hockey players who donned the colours of India.

After, Milkha Singh came the turn of Sriram Singh the great middle distance runner. He also was unbeatable in Asia and had the distinction of having reached the finals of the 800 metres in the Montreal Games. Before him was Gurcharan Sigh who made it to the finals of the 110 metre hurdles.

Women athlete, our hope !

Indian women, however, never had it so good till the time P.T. Usha came on the athletic horizon. Though there had been athletes like Stephie Desouza, Mary D' souze and a few others but they could never be rated in the category of P.T. Usha. In fact she is the only Indian athete to have won four gold medals in any international meet. But today she is trying to concentrate on the 400 metres hurdles. In the absence of the Socialist countries. in the Los Angeles Games in 1984 P.T. Usha had a good chance of winning the first athletic medal for the country.

For her, it turned out to be the case of being so close and yet too far away from the medal, She missed the bronze medal like Milkha Singh in Rome, by the hair-breadth margin and now she is aspiring to win a medal for the country in Seoul which is a very remote possibility. Besides Usha India has women athletes like Shiny Abraham, Vandana Shanbagh, Vandana Rao, Ashwini Nsachappa who are expected to bring glory to India in time to come.

Most of them belong to Kerala which is forging ahead in the field of athletics and that also amongst the women. There are quite a few juniors who are ready to take over the mantle the day the seniors retire. The most promising amongst the juniors is Zenia Ayrton.

Badminton

Badminton is another game in which India made a mark in the world. We have had players like Devinder Mohan, Nandu Natekar, Amrit Dewan, T.N. Seth and Charanjit Madan who were a force to reckon with in the badminton world. But it went to the credit of Dinesh Khanna, now an engineer in the Indian Oil Corporation, and Prakash Padukone to have brought India still on a higher pedestal.

The Engineer graduate from Punjab become the first Indian to win the Asian Badminton Championships in 1975 despite having had the challenge of countries like Indonesia, Malaysi a and Thailand. As a matter of fact Asia is ruling the badminton world especially with the arrival of China in the field. Prakash went a step further. He won the allEngland badminton title in 1980 but failed to reach the final of the World Championship the same year. In fact Prakash Padukone has taken Indian into the Thomas Cup quarter-finals single-handedly despite not getting much support from the other players.

Wrestling

History of Indian wrestling can be traced down to the Mahabharata and Ramayana period with wrestlers like Bhim towering over all. Then there had been wrestlers like Gama, Kikar Singh, Goonge and Imam Bux who ruled supreme in the world of wrestling. In fact Gama's achievements can be singled out as he did not lose a single bout in the world championships and brought laurels to the country.

But lately Indian wrestlers have not been able to achieve much in various championships in the world In 1948 during the Olympic Games K.D. Yadav was the single Indian wrestler who claimed the bronze medal while the others were eliminated in the earlier rounds However, in the Asian Games the Indian wrestlers were able to achieve something through Rajinder Singh (1978 Asian Games—74 kg), Kartar Singh (1978 Asian Games —90 kg), Master Chandgi Ram (1970 Asian Games—100 kg) and Sat Pal (1982 Asian Games —100 kg).

Only recently the Indian juniors did creditably well while winning the Junior World team title with six of them claiming the gold medals. This is a good sign despite the fact that there are not many wrestling mats in the country and the Indian wrestlers have to face a lot of difficulty while fighting on the mats. The Indian wrestlers learn the art of wrestling on the 'Mud Akharas'.

Cricket, the favourite

Recent craze, however, is cricket which has gained the maximum popularity after the Independence We had legendaries like Vijay Merchant, Lala Amarnath, Mushtaq Ali, Vinoo Mankad, Subhash Gupte while not forgetting about Maharaja Ranjit Singh better known as Ranji. It's in his name that the National Cricket Championship for Ranji Trophy is played. Despite these stalwarts India could not make a mark in the cricket world.

The victories

It was for the first time in 1972 that India, under the captaincy of Ajit Wadekar, won the rubber against England in England. Hereafter the Indian cricket had been doing pretty good. India has produced the best spin attack in Bishen Singh Bedi, EAS Prasanna, Venkataraghavan and Chandrashekhar and they were feared the most in the world. Earlier Indian spinners like Vinoo Mankad, Subhash Gupte and Vijay Hazare ruled the roost. The present spin quartet took the Indian cricket to great heights.

Cricket has produced the greatest player in the world He is sunil Manohar Gavaskar who holds practically all the records in the world. He is the only player in the world who has scored 10,000 runs and over 30 Test centuries.

Besides Gavaskar, India has produced a great all-rounder in Kapil Dev who successfully led India in the 1983 Prudential World Cup in England.The Indian team under his stewardship lowered the colours of the West Indies in this tournament before claiming the glittering cup. Not only this,India also won the World

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Four decades of sports

R. Sriman

Government has been extending enormous patronage and looking after sports and sportsmen with due care. To train players and to promote excellence in sports, National Institute of Sports was established at Patiala. The Government has recently introduced certain guidelines for sports bodies to ensure excellence in sports. The author feels that the attempt should be not to interfere with the efforts of the voluntary organisations to promote sports but to ensure that sports is run properly and kept above politics

SPORT IN INDIA HAS EVER THRIVED on patronage In the olden days, princes extended enormous patronage and looked after sport and sportsmen with loving care The House of Patiala looked after cricket and cricketers, inviting out even a professional Australian, Frank Tarrant and Englishman Bill Hitch The Maharaja Bhupinder Singh also fostered wrestling in a big way, giving to the world the famous Mansoor Hassan Gama

Jamsaheb of Nawanagar, Maharaja of Holkar, Maharaja of Bhavanagar and Kathiawar States also looked after cricket, Nawanagar producing incomparable Ranjitsinhji and K.S Duleepsinhji. The State of Pataudi produced two illustrious Nawabs. The Nawab of Bhopal and Nawab of Manavadar encouraged hockey in a big way. Several other States, like Kolhapur, Mysore and Baroda fostered wrestling.

Once princely India disappeared, Government of India adequately filled void. Railways and Services were the largest patrons, recruiting men for almost all disciplines of sport. Inter-Services meets and Inter-Railways sports meets became focal points for sportsmen to shine. Employment opportunities presented themselves readily and sportsmen were not wanting encouragement.

Post and Telegraphs Department, Customs and Central Excises joined services and Railways in regard to sports promotion. Indian Airlines were to become a force to reckon with the hockey and they have now ventured to hold an All—India tournament in football.

Council of sport

With various departments of the Government providing employment opportunities and encouraging sport among all sections of the public, the Government as a whole saw it fit to float an agency of its own to look after sport. Thus was born the All India Council of Sport, headed initially by people like Naval Tata and Dr P Subbaroyan. Important among subsequent heads of the organisation are Gen. Cariappa, Gen. Kumaramangalam, Maharaja of Patiala, and Field Marshal Maneckshaw.

The All India Council of Sports initially comprised representative of all the national sports federations, important sports persons, prominent sports journalists and Government functionaries drawn from Finance and Education Ministries. Union Education Ministry, until the recent formation of a separate Sports Ministry, have always been incharge of sport, apart from looking after youth welfare.

The All India Council of Sports was not merely a fund disbursing body. In an advisory capacity, it recommended participation of Indian teams in international tournaments and provided a valuable check in regard to team selection. Since Government always counted on the recommendation of the Council, Sports Febderations were wary and malpractices in regard to selection of teams were minimsed. Although, now and then, cries of protest arose the principle was generally accepted that insofar as Government funded sports activity and participation abroad, it had a duty to see that money was properly spent. After all, Government was answerable to people through Parliament.

Other sports

Even such sports like cricket, tennis and golf which did not need funds from Government were in a way answerable to it in regard to proper functioning. Even though they may not receive money from Government, they depended on it for clearance when it came to

international participation. Foreign exchange being a major issue, Government exercised an indirect check over even such bodies, which did not come to it for funds. In other words, all sports bodies were answerable to Government, and thus to the people, in some way or the other. A healthy check on sports activity in the country has thus been ensured.

Before the All India Council of Sports came into existence, the first organised coaching and development in sport was provided by Government through Rajkumari Amrit Kaur Scheme. Rajkumari Amrit Kaur, Minister of Health in the Nehru cabinet, was herself a prominent sportsperson. Her brother Maharaj Singh, who became the Governor of Bombay, was also a prominent sportsman. With Anthony D 'Mello as an organising genius, the Rajkumari Scheme was the first real Government patron of sport. With such stalwarts as C.K. Nayudu, C.K. Nainakannu, V. Sivaraman, Ranbir Singh, J.S. Rousseau were available to coach. The pioneering movement was eminently respected.

Indian sports institute

Scheme indeed was the forerunner of the National Institute of Sports to be formed at Patiala. Maharaja Yadavendra Singh of Patiala sold the magnificent Moti Bagh Palace and its sprawling open fields for a song to the Government. Price paid to the entire estate did not equal the present price of the marble slabs on the premises of the Palace ! Vast open spaces provided more than adequate space for cricket, hockey, football, volleyball, basketball, wrestling, judo, boxing and in fact all disciplines under Olympic fold.

The N.I.S. came to be regarded not only as the training ground for coaches in various sports, but also provided valuable ground for training of Indian teams before international participation. Some giants like Rahim and Dhyan Chand also came to be associated with Institute, which was later to be known as Netaji Subhash Chandra Bose National Institute of Sport.

A cycling velodrome came into being and a swimming pool of Olympic standards was also constructed. New sports like archery were also provided proper facilities. Gymnastics received special attention and so did weightlifting, the mother of all sports.

Under the strict and vigilant eye of Gen. Sant Singh, the N.I.S. was a centre noted for discipline. Brig. Chopra, M.N. Kaul and T.D. Ranga Ramanujan contributed towards the initial development of the Institute, which held close liaison with the Leipzig institute of sport. Earlier beneficiaries from these prestigious scholarships were C.M. Muthiah, Kittu, Kishen Thapar and many others.

Later R.L. Anand, who had graduated from the sports wing of Education Ministry, held a long stint as Director General. His drive and organising ability brought the N.I.S. into world focus, for not only the Olympic Solidarity Scheme was put into operation but several international seminars were held at Patiala.

At one stage the Government laid the stipulation that only teams with which N.I.S. qualified coaches were associated, were entitled to clearance for participation in international meets. This led to some heart-burning, but by and large, the principle was accepted, as it was all only for the good of sport.

Arjuna awards

Government instituted Arjuna Award. The glittering annual function held at the Rashtrapati Bhawan and presided over by the President is perhaps one of the most important event in the sports calendar of the country. A Dronacharya Award has since been institued, so that outstanding coaches could also be honoured

Government has also made the habit of recommending prominent sportsmen for the award of Padma Shri and Padma Bhushan.

A number of scholarship schemes has been instituted to provide financial support to needy sportsmen

Today, apart from Sports Ministry, there is in existence the Sports Authority of India, which has incorporated in itself the All India Council of Sports, the National Institute of Sport and the SNIPES Board Thus a multiplicity of sports bodies has been avoided

Provision of funds

Government has provided funds for sports development in a big way. Budget allotment, for instance for 1986-87 was Rs. 370 lakhs, excluding Rs. 29, 813, being the unspent balance of the previous year. This was a non-plan allotment and for Plan expenses, funds to the tune of Rs. 838 lakhs were made available for utilisation in 1986-87. The NIS completed its Silver Jubilee As many as 18 foreign coaches of eminence came to India

Stadia

India's pre-eminence in hockey suffered a landslide, because of lack of adequate synthetic surfaces. Initially only one astro-turf was available in New Delhi's National Stadium, but now additional astro-turfs are available at Shivaji Stadium, New Delhi, Dhyan Chand Stadium at Lucknow and another at Bangalore.

The construction of the giant Jawahar Lal Nehru Stadium for the Asian Games provided the most modern infrastructure for Olympic Games type of sport Two giant indoor stadia like the Indira Gandhi structure and the Talkatora Stadium are the most modern and the Talkatora Swimming Pool is the last word for aquatics

Sports Authority of India (SAI) has launched varying schemes in various pockets of sport. They have gone to Manipur for archery, Kerala for gymnastics and have even roped in such tribes as the siddis, who are descendents of African Negroes, for the development of sport in the country.

SAI has contributed largely to development of sports during the 40 years since Independence. They lent a helping hand to such ventures as the Great Freedom Run and the marathons.

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State Information Ministers for more regional TV Programmes

AIR to counter anti-India propaganda

THE 19TH CONFERENCE OF STATE Information Ministers was held in New Delhi on May 26, 1988 under the Chairmanship of the Minister of Parliamentary Affairs and Information and Broadcasting, Shri H.K.L. Bhagat.

The Conference was preceded by a two-day meeting of the State Information Secretaries and Directors of Information.

The Conference was attended by the Information Ministers from all the States except Andhra Pradesh, Arunachal Pradesh, Karnataka, Meghalaya, Punjab, Sikkim, Tripura and West Bengal which were represented by their senior officers, . Kerala was represented by the Chief Minister, Shri E.K. Nayanar, Tamil Nadu by the Advisor Dr. S.S. Sidhu, Pondichary by the Chief Minister, Shri M.O.H. Farook and the Union Territories of Dadra and Nagar Havali and Daman & Diu by the Administrator, Dr. Gopal Singh.

The Conference discussed the functioning of the different media in depth. On the basis of the consensus arrived at the Conference, the following recommendations were made:

A.I.R

Effective methods be adopted by the All India Radio to counter propagranda from across the border in States which are exposed to such propaganda.

The Programme Advisory Committees should function actively and meet under the Chairmanship of Secretary (I&P) of the State Government once in a quarter.

The State Governments will extend cooperation in providing land and other facilities to establish radio stations, transmitters, etc. while AIR will try to ensure that these projects are executed in the shortest possible time.

There is a need for greater interaction of the State Governments with the planning and telecast of Doordarshan programmes so that the developmental activities in the States are duly projected. This calls for greater involvement of the State Government agencies in the Programme Advisory Committees and such other forums dealing with the programme preparation.

The need for larger quantum of regional programmes and increased news time and linking of all the TV transmitters with the major production centres in each State was highlighted. It was also considered necessary to have in the long run programme production facilities at sub-regional level so that programmes relevant to the area of coverage could be produced on an extensive scale and conscious efforts be made to encourage participation by local talent.

Notwithstanding the cultural diversity, the need to project the national perspective at regional level was equally important for promoting the national unity and integration, especially in the present context.

There is a need for expansion of TV services throughout the country in view of the vast potential of TV in promoting social awareness and this could be greatly facilitated if the State Governments provide timely assistance in making available to Doordarshan necessary infrastructural facilities like land sites, assured supply of power and water, etc. Simultaneously Doordarshan will expand their infrastructure for extensive coverage by expanding their stringer services and units.

In order to project the aspirations and achievements of each State to the rest of the country, there was need for establishing extensive technical facilities for dubbing of programmes in different regional languages so that the programmes telecast on TV are understood all over the country.

There is an imperative need for increasing the regional content in National Programme so that the people in all regions are made aware of the socio-economic cultural progress of other regions.

Print media

The State Governments may keep the DAVP informed about the cases of exaggerated claims of circulation and/or papers indulging in writings calculated to cause communal disharmony or question the sovereigny and integrity of the country. The views of the State Governments will be given adequate weightage by the DAVP while proceeding the requests from such papers for empanelment or renewal of rate contracts.

In order to ensure that exaggerated claims about circulation are minimised and appreciating the limita-

tions of the R.N.I. Office in conducting circulation checks regularly all over the country, the District Magistrates may be empowered to conduct the circulation checks.

Small and medium newspapers may be given suitable facilities like cheaper newsprint, greater advertisment support and concessional Postal and Telecommunication tariffs. They should also be encouraged to modernise themselves and may be provided links with the news agencies through teleprinters.

Effective methods may be devised by the State Governments to monitor the publication of tendentious and objectionable writings calculated to cause communal disharmony or question the sovereignty and integrity of the country. Priority could be given to the newspapers published from areas prone to communal trouble and other newspapers which have come in for adverse notice of the Press Council. Necessary action may be taken under the law wherever warranted or the matter be referred to th Press Council.

The Press Council should function more effectively and ensure that cases involving objectionable writings are dealt with expeditiously. The State Governments should extend full cooperation to the Council.

The need for providing suitable training to the personnel. of the Information Departments of the State Governments was emphasised. The possibility of providing such training through the Indian Institute of Mass Communication and/or the feasibility of setting up of regional training institutes may be explored.

The books brought out by the Publications Division should be distributed more extensively. For this purpose, the Publications Division may publicise the availability of dealership and also explore other methods of reaching their books to the readers. Attempts should be made to publish the biographies of great personalities in languages other than those of their own States. This would promote the concept of national integration.

The contents of 'Yojana' Journal should also be enriched to make it useful to a larger section of populace. The Central Government should continue the publication of the language editions of 'Yojana', The State Government may consider extending their cooperation in promoting the sale of and releasing of advertisements to these journals.

The reach of PIB and DAVP should be expanded by opening more offices and Exhibition Units, etc. in important places all over the country. The State Governments may consider making available suitable accommodation both for official and residential purposes to accelerate this process.

The Photo Division may cover important meetings of State Govenments in Delhi which are newsworthy like the meeting of the State Governments 'representatives with the Planning Commission'. Such photographs are of relevance to the language press of the area.

The distribution of the material produced by DAVP may be rationalised to ensure that it reaches the targetted readership in time. The State Governments may send their suggestions in this regard.

The outlay for publicity efforts both in the Central and in the State sectors has not kept pace with the expansion of the development schemes thus adversely affecting the publicity efforts all round. The possibility of increasing suitably such outlays for publicity sector may be considered by the concerned authorities like Planning Commission, etc.

The Inter Media Publicity Coordination Committee may be activated and in order to ensure that they serve the desired objective, Senior Officers from various Media Units from the Headquarters should take part in the discussions of these Committees from time to time. The State Governments should also participate regularly at a sufficiently senior level in these meetings.

Films

For the purpose of coordination and a single window approach to matters relating to the film industry, all State Governments/Union Territery Administrations may designate one of the Departments as the nodal agency for this purpose

There is a very strong feeling in the film industry circles that the existing rates of entertainment tax in most of the States have become burdensome and that at the present juncture these rates are counter-productive. There is, therefore, a need for all the State Government/Union Territory Administrations to examine the rate structure of entertainment tax in the spirit of the Godbole Committee recommendations. The general perception is that rationalisation of rates may not necessarily lead to any decline in revenues.

There is need today to promote construction of cinema theatres. State Governments/Union Territory Administrations may evolve a package of incentives to give a fillip to this activity. In this package, particular attention may have to be paid to the urban land pricing policy. It was also felt that construction of cinema theatres in conjunction with commercial complexes may also be considered.

For promoting good cinema movement in the country, State Governments/ Union Territory Administrations may consider providing for automatic exemption from entertainment tax to films which win National/International Awards, films included in the India panorama and the children's films.

The problem of video piracy has to be tackled on an urgent basis. State Governments/Union Territory Administrations may issue necessary directions to their field agencies for enforcement of the legal provisions under the Cinematograph Act and the Copyright Act. Furthermore, it would be necessary to enact legislation for licensing video parlours to help curb large-scale piracy.

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What do we need to lift Muslims in India

S.T. Husain Rizvi

The author here feels that the backwardness of Muslims in India is different from that of other minorities in many respects—its duration, intensity extent etc. He tries to bring home the point that the root-cause of the Muslim community's overall backwardness is its lack of education, which, in turn, has brought about their economic backwardness. As a remedial measure, he suggests change in the methods of teaching and medium of instruction for the socially-disadvantaged children of the Muslim community in the country.

IT IS A POINT OF CONCERN and perhaps of significance that the Muslim community is the largest minority community in India which has been described as socially maladjusted, economically backward and educationally under-privileged community. As Such community deserves a sincere consideration and an effective educational planning from all responsible thinkers of the country. My assumption is that Muslim community is unique and different from other minority communities of India in terms of basic characteristics and behavioral pattern, and therefore, the psycho-educational strategies highly effective for other minorities may be comparatively less effective for this community. An unusual educational planning and method of teaching is therefore, imperative for educating this huge minority.

Indian Muslims are of the ratio of 1:8 of the total population, thus constituting a body of eighty million people who are economically under-privileged and eductionally backward. I am quite convinced in my mind that a sensible Government like ours, committed to social justice can, neither afford to ignore such a large minority and allow them to live backward and poor, nor can they be left to survive as an ineffective and non-productive members of the Indian society.

There is no denial of the fact that a great majority of this largest minority is backward in almost every sphere of life. The statement of Mr. N.C. Saxena, Secretary of the Minority Commission, that "Muslims are ten times more educationally backward than other communities in the country" (Times of India 26 December, 1983) is true and is also a matter of great concern for all of us. The thesis of Mr. Saxena has further been supported by the findings of Dr. Gopal Krishna, as reported by Professor A.M. Khusro, Member, Planning Commission, in his deliberation, on June 5, 1983, at the Nehru Memorial Auditorium, Teen Murti Bhavan, New Delhi, that "in every category and sub-category of the population studied, the standards of Muslims turned out to be lower than those of other controlled groups", their social performance, their economic performance, their involvement in national matters, their level is invariably lower, school dropout rates among them are higher and their success ratio is lower; and this is so without exception, in every region and in every category. In exclusively psychoeducational term these are the symptoms of their social, educational and economic backwardness, as such this is the mode on which the Muslim community has been identified as poor and backward. It is a sad state of affairs, no doubt.

Paying extra cost

Having such a huge minority as poor and backward is unfortunate. Simultaneously, being poor is a costly affair for the community as well as for the society and the state. In the first place it is community that suffers for being poor, as most of the students of Economics know, poor people have to pay extra cost for all that they buy and consume because of being poor, This extra cost they bear in terms of economic costs, educational costs, psychological costs and physical costs. It is a known fact that poor people have infinitely less economic freedom than their affluent countrymen do. Not only does the poor consumer have less money to spend but also his discretionary power, freedom of time, place, quality, amount and method of purchase are severaly restricted. Since he has little choice about the place, the quality and the method of purchase, the poor has to pay extra cost for every item he buys.

Educational backwardness

Like economic costs of poverty, the poor and the backward community of the society have to bear heavy educational costs as compared to their affluent fellowmen. Because of their strictly restricted discretionary freedom, those people have to send their

children to schools which have less qualified and less experienced teachers, poor equipments, poor methods of teaching, non-educative environment, over-crowded classes and seemingly discriminatory educational practice. As a result they have to bear the burden of a higher percentage of dropins and dropouts. The time, energy and money spent during the period their children remained in schools, is simply wasted. Those few, who manage to come out of these schools successfully, have to face further frustration because soon they discover that their degrees are hardly saleable in a highly competitive open market because they are treated comparatively of low standard.

Psychological backwardness

In the second place, it is the Government that suffers, because the costs borne by the entire society and by the state in terms of providing educational facilities, health services, fighting out diseases, the expenditure incurred on their general uplift and welfare providing security measures, remains non-productive and useless. Similarly, the poor people bear psychological costs for the simple reason that the children and adolescents growing up with the cluster of feelings like powerlessness, meaninglessness, normlessness, value isolation and self-estrangement may further make the community a fine case of behavioural disorder and social backwardness. Such state of affairs makes the problem more complicated.

Upto this point extra cost of being poor has been discussed. The remaining part of this paper analyses variables as duration, intensity/extensity of backwardness and also assumptions made earlier.

Root cause is poverty

My assumption was that this minority is unique and different from other minorities of the country. In this regard, may I once again quote Mr. N.C. Saxena's report on "Public Employment and Educational Backwardness among Muslims in India" saying that "educational backwardness is the root cuase of their economic backwardness. In my opinion, in the case of Muslim minority it is anti-thesis which is perhaps more correct. The fact is that Muslim minority, in course of time, has become economically backward. While other minoritities in India happened to be socially and culturally backward, so they are poor and educationally backward. In the first case while poverty is the root cause of the educational and economic backwardness, in the latter it is the social and cultural backwardness. Obviously the remedial measures and psycho-educational strategies would be different for these two minority groups. In the first case the efforts should be directed towards removing the poverty while in the latter case it is the cultural and socialk backwardness which should be removed first. The same theory is applicable for the black minority of U.S.A.

It is this vital difference between Muslim minority and other minorities in India which strengthens my assumption that Muslim minority is 'unique' and needs a different treatment.

Counter-productive approach

Duration of backwardness is another important factor that distinguishes Muslim minority from other minorities. It would perhaps not be out of place to recall that Muslims in India enjoyed the priveilege of representing ruling class for a period of more then seven hundred years. Even during the British period they were comparatively in a better position to preserve their culture and their language. Seemingly, the mishap started taking place, very fast some time just before partition which continued afterwards. Surprisingly the community which was having a sizeable representation in almost all walks of national life, lost its identity in such a short period of 40 years. It can be understood from the above analysis that the duration of backwardness of this community is shorter than that of other minorities of India and of certain other countries. For example, the scheduled castes and scheduled tribes have been living a miserable life for almost 2,000 years. The black community of U.S.A. had lived an under-privileged and miserable life for more than 200 years. The same is not true of the Muslim minority of this country. In spite of these facts, it is, of course, a matter of serious consideration for all of us that while in every country, minorities in general, showed a tendency of upward movement in respect of job opportunities, education and economic prosperity, the Muslims in India showed a tendency of moving downard almost in every respect and in every walk of life as established by Dr. Krishna in his study. Similarly the data presented in the studies in educational statistics, 1980 and the results of I.A.S, and Provincial Civil Services and other examinations available to us may supply sufficient proof of the downward movement of the Muslim community. These are the bare facts on the basis of which I gather that the approach and the efforts which help other communities in India to move forward and enter into a competitive world, (however slow the speed might be) perhaps, in the case of Muslim minorities it has worked in opposite direction.

Not too late

The extensity of backwardness, which is the third important variable, tells us whether the disease is hereditary or it has developed at a later stage. It also tells us how early it has been identified. In the case of backwardness of the Muslim community, I may say, that it is still not too late when the disease has been recognised, and any seriously thought-out remedial measure may be highly effective. The intensity of the problem can be identified from the symptoms, basic characteristics and behaviour of the community that persists in them. In the case of Muslim minority it can be witnessed that there is a general lack of education, sagging will to compete, insensitiveness to survive, loss of self-respect, lack of self-confidence, lack of trust and readiness to take risk or hard work, feeling of insecurity and lastly a growing fear of loss of culture and language.

In view of these facts it may be concluded that the intensity is high and any delay may be more harmful rather incurable.

Behavioural pattern

Now coming to the second part of the assumption regarding the behavioural pattern I understand that the graphic model presented here known as 'Johari Window' would be helpful in analysing the behavioural characteristics of minorities in general.

The model suggests that like individuals the groups and communities may also be categorized into four quadrants. Quadrant one: open community, quadrant two: hidden community, quadrant three: blind community and quadrant four: closed community. The open community is that community whose members are aware of their problems, motives and behaviour. Not only this but the members of other communities know them well. They are aware of their strong points They make concerted efforts to solve their problems. This is the community which remains active and speaks out. They are open to themselves and open to others. The Sikh community of India is a living example of this category. Quadrant two represents the hidden community. The members of this community are open to themselves but closed to the members of other communities. They are aware of their motives, behaviours, actions and reactions, but do not reveal themselves to others. They are mostly self-centred and do not pose any threat to the members of other communities. The Parsi community in India is the best example of this category. Third quadrant represents blind community. This is a community which is not open to themselves but open to other communities. They generally compromise with their circumstances but members of other communities understand the importance of their problems and they help them solve. They mostly depend on others and lack in self-confidence. The scheduled castes and the scheduled tribes may be the example of this catagory. Quadrant four is the closed community. By and large, the basic characteristic of this community is that they are neither aware of their own problems, behaviours and motives nor do they allow other to understand their problems. Being closed and ignorant they do not know how others feel about them. They are scared of knowing their weaknesses and do not value their strong points. They are mostly dominated by false beliefs and distrust. They have learnt to ignore, escape, forget and even to reject the bitter facts and realities of life. Muslim community in India is, to a great extent, a closed community.

It does not mean that each and every member of the community can be characterised as closed. There are, no doubt men and women who have deep sense of responsibility, courage, and consciousness and have set records of excellence in almost every field of life. But it is the behaviour of the community at large, that is counted.

The theory, however, is that the more a community is open the more there is possibility of its progress and development. It is the closed community that needs real education, to make them understand their weaknesses and potential, to develop trust, confidence and awareness within the community and with other communities, to train them to make calculated efforts to solve their own problems before asking help from others.

Such an analysis, once again confirms my assumption that Muslim community of India is different from other communities in their behavioural pattern and the education and training required by this community should be markedly different from the other minority communities.

Degenerating factors

I have a feeling that I would be failing in my duty if I end up here without giving suggestions for improvement in the educational system favourable for the development of this group. But before coming to this point I would like to delineate the possible factors responsible for the fast degenration of this community. Apparently there are four institutions which have the potential to influence the pattern of growth and development of an individual and of groups at different age levels:

1. It is the parental institution, which was once helping the child to develop moral values, character building, and language development and thus preparing him for an integrated adult life, has, in general, withdrawn itself from its job. May be due to economic stress or because of a general value crisis.
2. The formal educational institutions as pointed out by Sri. J.P. Naik are instruments of non-educating, rather than of educating the children of the poor families. In respect of Muslim minority it has been an instrument of non-educating, because of over-emphasis on Hindi and complete neglect of Urdu language as medium of instruction.
3. The social institutions continued their attention towards the uplift of scheduled castes and scheduled tribes and paid least attention towards Muslim minority.
4. So far as the political institution in India are concerned, small and big Muslim landlords had great influence on poor peasantry. After Zamindari abolition these landlords either joined politics or became industrialists. Both the groups need a bulk of poor and uneducated people for their survival. As a result, the political institutions, instead of educating the masses, found it more convenient to exploit them for their vested ends. A cumulative effect of all the four institutions, has reasonably, been the cause of fast deterioration of the Muslim community.

What is needed

As regards educational strategies, my humble submission is that the educational planners, curriculum

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Fair deal to minorities

(A Study)

The problem of minorities is the most baffling question confronting any modern democracy. In fact, it is the amount of security and trust enjoyod by different minority communities that shows how much free and democratic a country is. True to the spirit of democracy, India has accorded speical an specific privilages to its various minorities—religious, linguistic, ethnic and others and has been implementing faithfully the safeguards for minorities as enshrined in the Constitution of India.

This paper deals with the constitutional provision and their implementation aimed at giving a fair deal to minorities.

MINORITIES AND MAJORITIES ARE worldwide phenomena. Every country big or small, whatever may be the form of Government--democracy, dictatorship, communism or totalitarian, there are minorities—religious, ethnic, linguistic and other. What to say of democracies, where minorities are usually given all facilities not only to preserve but develop their peculiar characteristics, religious and linguistic minorities are recognised even in countries where there is arbitrary rule or a fake and deceptive democracy.

What is minority ?

Grammatically speaking, the term "minority" is a compound of the Latin word "minor" and the suffix 'ity' meaning *inter alic* "the smaller in number of the two aggregates that together constitute a whole."

But the concept of minority in social context like its problem is intricate. It has been defined differently by different persons suting their own attitude. In our case too, the term has not been clearly defined by our constitution, which provides a lot of privileges specially for the minorities. However, according to objective criterion and popular sense, it can be defined as— Any section of the citizens being small in number in a definite area, in respect of religion, language or any other ground, seeking equal or preferential treatment either to maintain its identity or to be assimilated with the majority is a minority".

While the above definition satisfies the existence of religious and linguistic minorities, the use of the term "on any other ground" is more explicit and wider in scope encompassing the sections of Scheduled Castes, Scheduled Tribes and other backward classes.

In a generic sense on the whole, minority means any community which is numerically less than 50 per cent of a state's population and in order that a community may call itself a linguistic minority, it must have a separate spoken language, but not necessarily a separate script.

Position in india

In India, which has continental dimensions and is the world's second most populous country. the Hindus form about 82 per cent of the total population of nearly 70 crores and they constitute the preponderent majority in most of the states and union territories. The Scheduled Castes and Scheduled Tribes from about 22 per cent of the population and are regarded as a part of the Hindu community.

The Muslims form the second biggest community in India constituting nearly 12 per cent of the total population. The Christians, the third biggest community are only 2.60 per cent of the population, more than 60 per cent of whom live in the southern states of Kerala, Tamil Nadu and Andhra Pradesh.

The Sikhs form less than 2 per cent of the population and are concentrated in Punjab where they constitute a majority (over 55 per cent). The other three main minorities are small in number and count for little in the country's political and economic life, though they have an identity of their own and are given all possible facilities and rights under the constitution. These are, Budhists (0.73 per cent)—over 85 per cent of whom live in Maharashtra, the Jains make up only 0.5 per cent of the country's population spread mostly in Maharashtra, Rajasthan, Gujarat, the Zoroastrians (the Parsees) numbering less than 80,000 and are concentrated mostly in Bombay.

Origin of minority problems

India has had minorities from time immemorial, but never in her history before the coming of British did the question of protecting the interests of any particular

group concerning race or religion, caste or culture arose. There was communal harmony and mutual understanding before the advent of the British rule in India, so much so that in the First War of Independence of 1857, all the major communities of the soil made a common cause against the British and every community fought and suffered heavily and almost equally. Therefore, it can be safely concluded that the problem of minorities in India was mainly created by the foreign rulers. They exploited the multiplicity of the Indian people in the name of religion and caste and applied their policy of 'Divide et impera' (Divide and rule) to break the solidarity of the natives. Of course, it cannot be denied that there were and still are certain inner contradictions, social and economic, among the different communities of India.

It is an admitted fact that it was the problem of minority in India that held up the progress of the country for a number of years and proved to be the most serious bottleneck in the matter of transfer of power. Inspite of the fact that free India had a painful birth, she retained her multi-religious and multi-linguistic character and hence the problem continued to exist.

Constitutional provisions

The framers of our constitution were quite alive to the complex character of the problem of minorities and they incorporated a number of measures in the fundamental laws of the land to uphold the ethos of Indian constitution and maintain its distinct character of having a secular and egalitarian society.

The character of safeguards as provided in the constitution for the minorities is of two kinds, i.e., negative and positive Matters in which the state is forbidden to perform an action that goes against the interests of any minority are called negative safeguards. Safeguards that guarantee safety, security and opportunity for the full development of the general and particular interests of different minorities are called positive. The former are guaranteed under the chapter "Fundamental Rights" applicable to all minorities and the latter are discussed to a large extent under part XVI of the constitution under "special provisions relating to certain classes" Both these types of safeguards have been found to be detailed and unique, and are important and significant, not only for the mere existence of different types of minorities, but also for their smooth and harmonious development.

The general provisions, which are enjoyed by both minorities and majorities alike are contained in Articles 15,16,25,26, and 28. They profess, among other things, equality and non-discrimination before the law and religious freedom. There also exist some specific provisions in the constitution for safeguarding the interests of the minorities whether based on religion or language and of the weaker sections like Scheduled Castes and Scheduled Tribes.

So far as the scheduled castes and scheduled tribes are concerned, statutory provisions exist for providing reservations in legislatures and services for these types of people. Although the original provision was for 10 years, it had been extended from time to time by the amendment of the constitution, the latest amendment in this regard (45th) for reservations of SC/ST extending for 40 years, i.e., till 1990 having been made in 1980.

Article 29 of the constitution makes specific provision for protection of the interests of all minorities. According to this Article, "any section of the citizen residing in the territory of India or any part there of having a distinct language, script or culture of its own, shall have the right to conserve it."

No citizen, according to clause (2) of the Article, shall be denied admission into any educational institution maintained by the state or receiving aid out of state fund, on grounds only of religion, race, caste, language or any of them.

Taken together, Article 29 and Article 30 confer four distinct rights on the minorities. They are

(i) the right to conserve its own language, script or culture,
(ii) the right of all religious and linguistic minorities to establish and administer educational institutions of their choice;
(iii) the right of an educational institution not to be discriminated against in the matters of state and on the ground that it is under management of a minority
(iv) the right of a citizen not to be denied admission into state-maintained or state-aided educational institutions on grounds only of religion, race, caste or language. Thus, cultural, educational and other rights are guaranteed to all minorities in the country.

Similarly, Article 350 of the constitution confers right on the linguistic minorities for getting redressal of their grievances relating to languages. Articles 350-A and 350-B specifically provide facilities for instruction in mother tongue at the primary stage of education to children belonging to linguistic minority groups and appointment, of a special officer for linguistic minorities to investigate all matters relating to safeguards provided for under the constitution.

Implementation of safeguards

In order to ensure that the constitutional protection given to all classes of minorities is observed in letter and spirit, the Government has appointed a number of special officers. It has also appointed a number of commissions and committees to review the implementation of the same and suggest fresh measures needed for their efficient administration.

Minority commission

Minority Commission is a legally constituted body appointed in 1978 to look after and review the welfare of minorities in the country. At present, the commission has a chairman and four other members belonging to minority communities. The commission, among other things is entrusted with the task of—

(i) evaluation of the working of various safeguards provided in the constitution.
(ii) making recommendations to ensure effective implementation of the safeguards.
(iii) reviewing implementation of the policies pursued by the union and state governments.
(iv) looking into specific complaints regarding the deprivation of rights and safeguards guaranteed to the minorities.
(v) undertaking surveys and research.
(vi) suggesting appropriate legal and welfare measures in respect of any minority and submission of periodical reports to the Government.

The Minority Commission has so far submitted six annual reports.

The commissioner

As per the constitutional provisions, a special officer called "Commissioner for Linguistic Minorities" has been appointed to investigate all matters relating to the safeguards provided for the linguistic minorities. Created in 1957, the commission looks into the representations and complaints received from various associations and individuals belonging to the linguistic minorities for redressal of their grievances.

15-point programme

The late Prime Minister, Mrs. Indira Gandhi, who was a pioneer in initiating welfare activities for the common man formulated a 15-point programme for the welfare of minorities. The 15 point programme which continues to be followed by the present Government seeks to bring about fuller integration of minorities in all aspects of national life by creating a sense of security in them and curb the elements responsible for disturbing communal harmony. The 15-point programme broadly covers the following:

(i) prevention of communal violence and promotion of communal harmony.
(ii) giving special considerations to minorities in the matter of recruitment to services in central and state police forces, nationalised banks, public sector undertakings and railways etc. and making the selection committees representative for the above purpose.
(iii) laying special emphasis on the educational needs of the minorities.
(iv) measures for ensuring fair and adequate share of the benefits of the development programmes including the 20-point programme to the minorities.
(v) provision for expeditious action for redressal of minority grievances and institutionalised arrangements for dealing with the problem of minorities on a continuing basis.

The Union Government set up a special cell called the "Minority Cell" in 1983 to monitor implementation of the Prime Minister's 15-point programme. This programme is administered by the Union Government and is implemented through state governments and Union Territories with the machinery operated by nodal officers appointed for the welfare of the minorities. The monitoring cell, now under the Ministry of Welfare-coordinates and carries out regularly monitoring of the progress of the programme and has been obtaining quarterly reports on its implementation from the states and Union Territories. The review is undertaken from time to time and the deficiencies noticed in the implementation of the programme are brought to the knowledge of the state governments and central ministries for appropriate corrective measures.

Some of the states and Union-Territories have also established minority cells for efficent implementation of the programme for minority welfare.

Other welfare measures

(i) various states have set up minority cells in their state secretariats and established state Minorities Financial Corporations to ensure easy flow of credits to minorities.
(ii) states have been advised to hold quarterly review meeting at Chief Minister/Chief Secretary level and monthly review meetings at Divisional Commissioner's/Dist. Collector's level.
(iii) some states have taken action for making selection commitees for recruitment to state police forces representative.
(iv) instructions have been issued for making selection committees for recruitment to Group C & Group D categories in nationalised banks, public sector undertakings and Railways etc. representative in character.
(v) action has been taken by the Department of Banking for the setting up of pre-recruitment training centre for minorities, and recruitment of officers belonging to minority communities in state capitals. Steps have also been taken to establish prerecruitment training centres for clerical cadre in 40 selected backward minority concentration districts.
(vi) state governments have been directed to ensure no discrimination against minorities by employment exchanges in registering and sponsoring names to recruitment agencies and conducting special registration in minority concentration areas and minority educational institutions.
(vii) University Grants Commission (UGC) has taken up a scheme for coaching of weaker sections amongst minority community in 20 universities and 14 degree colleges in the country.
(viii) National policy for education, 1986, provides for measures for special attention to educationally backward minority groups. The programme of action comprises of in-service training in computer science and mathematics and career guidance for teachers from educationally backward, minoritymanaged institutions, adequate thrust to adult, early childhood, and girl's education programmes in minority concentration areas and ensuring minority

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Let voluntary agencies play a positive role

Dr. C. Harichandran

In the wake of phenomenal increase in the number of voluntary agencies, a geat controversy has arisen about their role in the process of national development. The author laments that in the name of eradicating the exploitive forces of the society, these agencies are nurturing their own interests. He feels that to justify their existence it is the bounden duty of voluntary agencies to work for organising people for their economic and social development.

THE GENESIS OF VOLUNTARY WORK in every society is the need felt by individual members and groups to help the community. The historical perspective of voluntary work was associated largely with relief measures for the victims of war and natural calamities, rehabilitation work among lepers, orphans widows and untouchables in India. Over the years there was a shift in approach from relief and welfare to development, action for liberation, social justice etc. This approach was viewed in the holistic dimensions of social, psychological, economic and cultural change. In India, voluntary agencies have provided a valuable series of unplanned socio-economic change experiments. Hatch's work with Y.M.C.A., Tagore's efforts with Bengali peasants and Shantiniketan, Gandhiji's programme as a model for the rural development of India, Mayer's demonstration of successful social and economic change at Ettawah all these cases provide one of the richest sources of insight into appropriate and feasible development methods in India.

There are three distinct advantages the voluntary organisations have, viz. flexibility, small size and ideological basis. These agencies are usually more responsible to changing conditions and more attuned to grass root level situations. The flexibility aspect comes about largely because of their smaller size, a factor which enables them to have more direct decision making. Finally these bodies have the concern with social justice, human rights and equality, and economic opportunity for every one but especially the poorest and weakest.

Major goals

Most of the voluntary agencies are organised with three major goals: (i) working with the people for their economic development, (ii) providing education for development and (iii) action for social justice. The Five Year Plan, Renuka Committee 1959, Dantwala Committee 1978, Mehta Committee 1978 and Sivaraman Committee 1978 have all acclaimed the positive dimensions of these bodies. The role of voluntary organisations as a catalyst for planned economic and social development has been recongnised right from the beginning. The First Five Year Plan stated: Voluntary organisations engaged in social work can greatly enlarge the scope of the national plan by developing their own activities, attracting an increasing number of enlightened men and women with a desire for constructive work, and dealing with social problems for which the State cannot provide sufficient measure. Voluntary organisations were required to develop fields for constructive activity for women, youth, teachers and students in the national development programmes. These ideas continued to be an integral part of the process of Planning.

Central Social Welfare Board

The ideas contained in the Plan documents were not mere rhetorics, but an expression of a genuine desire to involve the voluntary organisations in the social and economic development programmes of the country. As a sequel to this, the Government of India established the Central Social Welfare Board in 1953 and assigned to it the following tasks:

a. to conduct a survey on the needs and requirments of social welfare organisations;
b. to evaluate the programmes and projects of the aided agencies;
c. to coordinate assistance extended to social welfare activities by various Ministries in Central and State Government;
d. to promote the setting up of social welfare organisations on a voluntary basis in places where no such organisations exist;
e. to render financial aid when necessary to deserving organisations or institutions on terms to be prescribed by the Board.

The Central Social Welfare Board became a link between the voluntary Organisations and the Central Government for promoting social welfare activities. In

this connection, Pandit Jawaharlal Nehru, the first Prime Ministr of India, who was instrumental in setting up the Board, had observed, "This attempt that we are making to encourage spocial welfare activities is, in a sense, rather unique. It is not some Central Authority that is doing it all by itself, nor does the burden of this fall on the local social welfare organisations. It is a combination of the two, where the Central Social Welfare Board, comes in as a helper and adviser and at the same time the local welfare organisations, who are best suited for it, to undertake the work." The setting up of the Central Social Welfare Board was followed by the establishment of State Social Welfare Advisory Board in all States and Union Territories. The 7th Five Year Plan has laid increasing stress on the role of voluntary organisations in development and beneficiary-oriented programmes. It outlined several areas where these bodies could effectively participate in the development effort. At the national level Council for Advancement of Peoples' Action and Rural Technology has been organised with flow of funds from various Ministries of the Government of India. Several States have now 'People's Action for Development' organisations to coordinate the activities of the voluntary organisations.

Phenomenal increase

An estimate reveals that there are over twenty thousand voluntary organisations operating in the country. Moreover, there has been a phenomenal increase in their number in recent years. These organisations can be grouped into micro and macro level organisations. Most of these are funded by foreign agencies on humanitarian grounds. A large number of them are committed to Gandhian approach to development problems.

Scathing criticism

Though the positive aspects have been acclaimed by all sections of the society, there has been a controversy going on over the functioning of these bodies in the development process. The Kapur Commission in its report on the affairs of the Bharat Sevak Samaj raised several fundamental issues on the role of voluntary organisations in national life and Government's relationship with them. The lesson to be drawn from the Commission's report is that it would be better for the Government to carry out development and welfare activities through its own department tnen through the voluntary organisations. The controversy has assumed new dimensions and scathing criticisms have been made in recent days. These organisations are viewed largely as exploitive bodies in the name of justice, awareness, education and so on

Re-defining the role

The Five Year Plans did talk of social justice with major emphasis on improving the living standards of the masses and eradication of inequalities that persisted in the economy. Planning for development calls for not only growth in per capita income but also an equal distribution of the fruits of development effort. The eradication of poverty and reduction of inequalities are needed to achieve the new economic order. The new development order means that the living levels of the people living below the poverty line must rise. It also means a new order which will reduce the glaring inequalities persisting in the economy. There are about 2.5 crore people who remain unemployed and for them development means gainful employment with a living wage. The role of voluntary agencies as catalysts of development has to be seen in this perspective.

The crucial question often raised is whether the voluntary organisations can contribute to development? Are they a part in the development process today? A close look at the functioning of these bodies would bring out the fact that they should redefine their programmes and priorities in the light of the development needs of the day. The two major problems the Indian economy facing are over-population and growing unemployment. In this context they should give importance to (i) family welfare programme, (ii) providing avenues for right to work and live and (iii) organising the poor for education and development.

Family welfare programme

By 2000 A.D. the Indian population is expected to reach the level of 1000 million which would wipe out all the gains of economic progress. Although India has had national family planning programme for more than 30 years, only a few States have made real progress in reducing birth rates. The national annual rate of population growth has remained between 2 and 2.3 percent since the fifties. It creates problems like poverty, unemployment and under-employment. The growth strategy of the eighties and also in the coming decades cannot afford to ignore a clear check on rapid growth of population. If it goes uncontrolled, whatever quantum of money is pumped in the rural sector of the economy, it cannot solve the problem of rural poverty. Already India has a per capita national income much below current levels in the developed countries. Therefore we cannot afford to give up economic growth or technological development for other reasons. In view of this, growth of population should be halted or brought down to one percent growth or less than that. The objective is to attain the Net Reproduction Rate to one by 2000 A.D.

The voluntary agencies should accept and implement family welfare programme as their core strategy of development programme. Family welfare programme has two aspects: one clinic and the other education. Every voluntary agency should start its own clinics with or without the assistance of the Government. Though the scope of providing clinical facilities is difficult in regard to resource constraints both financial and technical for small organisations, the macro level and larger organisations can actively involve themselves in this area. Still, these agencies can do a lot in population education.

Educating the masses

The National Workshop on Population Education

held at Bangalore in May, 1978, recommended that Population Education should be integrated with agriculture extension and rural development activities. The implementation of the programme should be the responsibility of the rural development organisations is the new emphasis. Also, it is increasingly felt now-a-days that family welfare education, as a long term measure should be introduced in schools and colleges. Family welfare education through schools will have only a limited applicability to bring about a rapid change. It is encouraging that the educated are responding to the family welfare programme in view of enjoying a better standard of living, better care to the children etc. But the situation among the illiterate masses is totally different. Therefore concerted efforts must be taken to provide education to the rural population.

The education part should comprise the following. Firstly, creation of awareness about population problems is necessary. An understanding of the problem in the light of the global, national and family interest is necessary. Secondly, education should be given to realise the need for adoption of a small family. The organisations involved must be able to communicate to the masses the need of a small family in the context of the meagre family expenditure, advantages of a small family, better future of the children, health of the mother and child and so on. Thirdly, education should be provided regarding available facilites of family welfare programme. Most of the people are ignorant of it. It is through education only, that the motivation of the people on this vital issue becomes possible. Therefore, the need of the hour is to launch the population education programme on a war footing throughout the country. As there are over twenty thousand voluntary organisation, they can share a major part of the work of the Government in this sphere. Moreover these bodies have greater access to direct relationship with the people. Acceptance of family planning requires contact with the people which the voluntary organisations have with them. The attainment of the objectives will remain a distant dream unless family welfare becomes a mass movement.

Providing full employment

The development strategy calls for providing full elmployment which means employment at a fair living wage. Poverty arising out of unemployment and under-emeployment cannot be eradicated unless people are provided with work opportunities. A recent announcemment made by the Planning Commission reveals that the backlog of unemployment today is 22.6 million. A determined attack on removal of unemployment and significant reduction in under-employment is the major strategy of the Seventh Plan. Employment strategy of the present Plan envisages (i) to adopt an employment-intensive sectoral planning, (ii) to regulate technological changes to protect and enhance employment and (iii) to promote full employment.

The voluntary agencies are operating in a wider area of the rural economy viz. agriculture, animal husbandry, fisheries, small scale and village industries etc. There is greater employment potential in the these sectors. The present employment policy of the Government also calls for creation of more opportunities in these sectors only. If the agencies rise upto the level of creating 100 employment opportunities by each agency through organising production and marketing means they will be of greater service to the nation. Even if 50 percent of the organisations working in our country come forward to help 100 unemployed persons the situation of our country will be totally different. Moreover, as most of these organisations are rural based, the wealth from the rural sector of the eonomy can be generated. Thus, next to family welfare programme, all the organisations must work for rural development by utilising the idle manpower resources. Manpower resources constitute the vital part of economic development. Another point which should be stressed here is that all the organisation claim to be working with the people for their economic development. How can their role be an effective instrument to the people if they are not responding to their needs ? They should justify their existence through generating employment and wealth in the development process. If the voluntary organisations do not participate in solving the unemployment problem, that means they are drifting away from the very breath of life.

Organising the poor

The Seventh Five Year Plan 1985-90 has given special emphasis on organising the rural poor with a view to ensuring that the benefits intended for them actually accrue to them. Of the 220 millions that make up the country's work force, exactly 10 percent work in the organised sector. The Employment Market Information Programme estimated that as on 31.3.1987, there were 22.8 million workers in the organised sector and 197.2 million in unorganised sector. The characterisation of unorgainsed labour by Labour Bureau, Shimla as one involving (i) meagre wages (ii) want of employment opportunities, (iii) lack of welfare facilities and (iv) the discriminatory treatment given to them both socially and economically is acceptable to social scientists. The Sixth and Seventh Plan therefore stressed the need for organising the unorganised for their betterment. The poor should no longer be the target of exploitation. Awareness through education should be created at all levels by these organisations. People should be made to think, work and live in a right way. Through education the voiceless should have a voice in getting the share from the national cake. The benefits of development planning must reach common man in this process.

Conclusion

As a matter of fact, a great challenge is there before these organisations, Most of the voluntary organisations, registered and unregistered, regard education as their integral part of work. In the name of eradicating the exploitive forces of the society, awareness etc. a large number of organisations themselves have in turn become exploitive forces without working with the

(Contd on page 33)

Voluntary service the Sevadham way

Vijaya Joshi

The author here has made a survey of the services rendered by the Sevadham Trust—a voluntary organisation entrusted with the task of taking the primary health scheme to 24 villages in the hilly areas of Ander Maval in Pune district of Maharashtra. The Trust, according to the author, has successfully completed the mission and has not only been able to remove superstitions and fears from the minds of the rural people but has also worked for their multi-dimensional progress.

1986 IS THE SILVER JUBILEE YEAR of Zilla Parishads In Maharashtra. Pune Zilla Parished has taken a courageous step in this year of silver jubilee. Under this new scheme, total responsibility of primary health care of 24 villages in the hilly area of Ander Maval in Pune district has been entrusted to a voluntary organisation. In the beginning, it was questioned whether the responsibility of such area would receive better health care and maintain a certain standard. But afterwards, this scheme was found more reliable.

Ander Maval tribals

The tribal population in Maharashtra State is about nine percent. Almost all the tribals live in inaccessible hilly area of the State. Ander Maval area is also a tribal area and some of the villages in this area are totally cut off in the monsoon season. The roads are not traffic worthy and one cannot reach this area except on foot. Sevadham Trust has accepted the challenge to work in such adverse situation.

Sevadham Trust

Twenty four villages in the Ander Maval area have been unanimously handed over by Zilla Parishads to Sevadham Trust. The Sevadham organisation was already in this field for more than ten years. The workers are well acquainted with the problems involved in such services. The residents of this area are responsive to Sevadham Trust. The Sevadham Trust was founded by handful of motivated doctors. Dr.S.V.Gore and Dr. Wadhokar started the work in this hilly area about ten years ago. The people here were illiterate and supersitious. Instead of attacking their blind superstitions, this pair of doctors persuaded them to have medical treatment. A T.B. patient was being treated in a village by invoking the gods and applying ashes. Dr. Gore requested them that he would treat the patient along with the godsmen. The patient was cured and the villagers were convinced of the medical treatment given by the doctor. The two doctors came to this area after accepting the challenge of the adverse situation. They took the help of local poets and artists and prepared folk songs which emphasised the need for health care and small family.

Unhappy health scenario

Thetrained nurses or midwives are reluctant to work in the rural area. There are not enough medical facilities and hence the health situation of this area is deteriorating. In order to break this vicious circle, Dr. Gore introduced the idea of bare foot doctor. He trained the locel men and women to undertake the job of nurse and midwife. These energetic local volunteers go from house to house and from farm to farm, talk to the patients and give patent medicines. The importance of pre-natal care is conveyed to the women folk. In the beginning, the old style mothers-in-law objected to the pre-natal care. The volunteers convinced them by teaching importance of fertilisers for the good yield. In order to have healthy and intelligent grand children, the mother must be given anti-tetanus injection and nutritious food. Thus by teaching in their own language and giving the local examples, the entire population has been persuaded to accept the importance of primary health centres.

The multi-purpose workers registered the entire families in the village and the health condition of the family members. Triple antigen, polio dose etc. is given on time at the doorstep of the family.

The services

The Trust has started eradication of leprosy since last year. About 165 villages are covered under this scheme. The Sevadham Trust looks after the potable water supply of this area. The well water is chlorinated

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Dynamism in resource mobilisation, a must

S. Sethuraman

The author here highlights the directions on development strategy given by the Prime Minister for preparing the approach paper for the Eighth Five Year Plan. The Prime Minister has underlined the need for making herculean efforts to mobilise additional resources and efficient use of these resources to achieve the higher growth rate.

THE PLANNING COMMISSION has now embarked on exercises for the Eighth Five Year Plan, due to begin on April 1,1990. Prime Minister Shri Rajiv Gandhi, who chaired two meetings of the Commission recently, has given directions on the development strategy to be aimed at in preparing a detailed approach paper projecting the desired growth rates of the economy in the next Plan. The Prime Minister has been reported by an official spokesman as having asked the Commission to make a bold and innovative approach and not be bound by soft options as the nation has the self-confidence to move ahead.

Targets not achieved

We are now in the fourth year of the Seventh Plan, and it is naturally the time to start thinking about the Plan to follow, because India is committed to planned development as enunciated by Jawaharlal Nehru, the architect of modern India. As each plan is about to run its course through, our sights are raised for the next one to do even better than the present one. Mid-way through each plan, we have found by experience that things have not gone on as well as we had planned, in spite of all the investments made as envisaged. This is partly because of factors beyond our control, as each Plan suffers some shock or the other in its course, and partly because of our own inability to ensure timely implementation, let alone effective use of resources.

While mid-term corrections are made to keep the plan on its tracks, with such adjustments as are thought feasible, rarely has a plan achieved its targets over a wide spectrum in a substantial measure. The Seventh Plan is no exception to the misfortune and the disastrous drought of 1987 threatens to rob the plan of its growth assumptions.

Notwithstanding great odds, India has made tremendous progress in several directions including virtual self-sufficiency in foodgrains, though the rate of growth in agriculture is far from satisfactory. A herculean effort has to be made this year and the next to achieve the revised foodgrain production target of 175 million tonnes. If we succeed, our food self-sufficiency would have come to stay and provide the solid base for new thrusts in anti-poverty and rural employment programmes.

Direct attack on poverty

Agriculture will thus continue to remain one of the primary concerns as we move into the Eighth Plan. The Prime Minister has emphasised the need for a higher rate for the economy. In the four decades of development experience, India could record only a trend growth rate of [illegible]5 per cent in Gross National Product until the Seventies; thereafter, the economy moved to a relatively higher growth rate. The earlier assumptions about growth bringing about income redistribution failed to materialise. While a high rate of growth is important to strengthen the resource base and enable the country to become self-reliant, a direct attack on the problems of poverty and unemployment has become inevitable. The various anti-poverty programmes which got a push in the Seventh Plan will thus have to be stepped up in the next plan. Shri Rajiv Gandhi has also said that the Eighth Plan will focus on a substantial improvement of the agriculture sector and elimination of poverty.

Higher growth rate

The Seventh Plan itself had been framed against a 15-year perspective which aims at removal of poverty and provision of full employment by 2,000. While these objectives remain, the question arises as to what rate of growth India should aim at, in order to achieve these socio-economic goals while providing for expansion of human resource development programmes. India had always aimed at a five per cent average annual growth of national income in the five year plans so far. The needs of development as well as the intrinsic capacities of the economy would appear to justify targeting a higher

growth rate of six to seven per cent. A mere five per cent growth rate, even if achieved, does not adequately take care of per capita requirements or provide employment opportunities to a rapidly growing labour force. The call for "Bekari hatao" give by the Prime Minister means the Eighth Plan would have to be far more oriented towards providing productive employment opportunities than any of its predecessors.

In its mid-term appraisal of the Seventh Plan, the Planning Commission had noted that measures to reduce population growth had not been as successful as anticipated and these have to be stepped up in future. On the current trends, the Seventh Plan projection of a population of 986 million by 2001 may be exceeded and it will hit the one billion mark. The unchecked population growth will aggravate the problems of under-development.

An acceleration of growth rate thus becomes essential if the long-term objectives of eliminating poverty and ensuring full employment by 2000 are not to be slowed down. Such a growth rate has to be between five and seven per cent per annum. According to tentative calculations of the Commission, a seven per cent growth rate would call for stepping up the savings rate to 28 per cent of Gross Domestic Product from the current level of around 22 per cent. Would this be at all possible, when raising of the savings rate by even one percent in the Seventh Plan has not come within grasp? In fact, the Commission's mid-term appraisal said domestic savings over the five year period could fall short of the original target and to that extent there would be dependence on inflow of capital from abroad.

What is required

The Planning Commission will therefore, work on two alternative scenarios for attaining growth rates in the range of 5 to 7 per cent. India has mobilised about ninety per cent of resources for development within the country and only relied for the balance on resources from abroad. With the stagnation in the savings rate in recent years, additional resource mobilisation has become difficult while the disturbing growth of non-plan or non-developmental expenditure has seriously cut into resources available for plan investments. It is only through increasing borrowings and deficits that both the plan and revenue expenditure are financed. It may take a few years to bring about some degree of fiscal balance. But, as Shri Gandhi told the Commission, bold efforts at additional resource mobilisation will be required, but what is of equal importance is the efficiency of resource use., The Eighth Plan will also have to provide for massive investments in infrastructure, especially energy sector and transportation, for which long term plans are under preparation. Yet another dimension to the Eighth Plan will be bringing into operation at last, the district planning process involving the local people, to which Shri Rajiv Gandhi stands committed. □□□

(Courtesy: spotlight AIR)

(Contd from page 7)

basketball and a multipurpose indoor hall to cater to games like wrestling, judo, table tennis and gymnastics.

A new programme for mass participation has been launched for children. The first major demonstration of *Bharatiyam* was organised during the closing ceremony of 2nd National Games held at Trivandrum in December, 1987 in which more than 3000 children participated.

Cash prizes as incentive to schools winning district level tournaments in specified disciplines at the rate of Rs. 10 thousand per sports discipline in each district have been introduced. During the 1st year in 1986-87, some schools in 19 States and Union Territories won prize money under this scheme.

National Games on Statewise basis were revived in 1985 with a decision to conduct them once in two years.

Special emphasis has been laid on development of sports in the North-East region. 1004 participants in 11 disciplines took part in the Second North East Regional Sports Festival at Guwahati in February 1988. Besides the Arjuna Awards which were introduced several years ago, we have now introduced the Dronacharya Awards for outstanding coaches. Our emphasis is now on consolidation of existing programmes by making them more result-oriented. □□□

(Contd from page 16)

Government has also encouraged bodies like the Steel Authority of India, Public Sector Enterprises and allied units so that not only sportspersons are given employment opportunities but sports competitions are organised in a big scale.

Recently, Government has introduced certain guidelines for sports bodies to ensure excellence in sport. The attempt is not to interfere with the running of sport in the country by voluntary organisations but to see that sport is run properly and above politics. □□

(Courtesy. PIB Feature Service)

(Contd from page 18)

The prints of featurettes made in local languages/ dialects on social themes by Films Division may be acquired in larger number for exhibition through screening outlets available to State Government/Union Territory Administrations.

The mofussil accredited press correspondents should get concession for travel by rail and bus. The concession is presently available to those accredited at the State Capitals. □□□

Benami transactions ordinance, 1988

Satish Kumar

The Benami Transactions Ordinance, 1988 was promulgated by the President on May 19, 1988. It prohibits the right of the real owner of a property held benami to recover it from the person in whose name it is held. The Ordinance is the result of the recommendations of the Law Commission made in this regard in its 57th Report. The author gives below salient features of the Ordinance.

THE 57TH REPORT OF THE LAW COMMISSION had made various recommendations concerning Benami Transactions and related matters. The Benami Transactions (Prohibition of the Right to Recover Property) Ordinance, 1988, promulgated by the President on May 19, 1987 is the direct outcome of these recommendations of the Law Commission.

The Ordinance extends to the whole of India except the State of Jammu and Kashmir. It came into force with immediate effect. The Ordinance will apply to all the existing benami holdings. It hits at the root of the benami transactions in property. It prohibits the right of the real owner of a property, held benami, to recover it from the person in whose name it has been held. In fact,it does not recognise the benami character of transactions at all. It makes the person, in whose name a benami property is held, the real owner of the property. The Ordinance further prohibits a person from filing any suit, claim or action to enforce his right in respect of property held benami against the person in whose name the property is held. It also prohibits any similar action even on behalf of a person claiming to be the real owner of such property to recover the property held benami. The real owner will not be allowed to plead in any suit, claim or action that the property is held benami. The doctrine of benami will, by virtue of this Ordinance, cease to be a part of the Indian law.

Similarly no defence based on any right in respect of any property held benami, whether against the person in whose name the property is held or against any other person will be allowed in any suit, claim or action by or on behalf of a person claiming to be the real owner of such property.

However, with a view to protecting good faith and fair dealings the provisions of the Ordinance will not apply in certain cases. One such case is where the person in whose name the property is held is a coparcener in a Hindu undivided family and the property is held for the benefit of the co-parceners in the family. The other is where the person in whose name the property is held is a trustee or other person standing in a fiduciary capacity and the property is held for the benefit of another person for whom he is a trustee or towards whom he stands in such capacity.

The Benami Transactions (Prohibition of the Right to Recover Property) Ordinance, 1988 is intended as a socially progressive measure. As a spokesman said, the Ordinance would go a long way in checking the generation of black money and tax evasion. It would also put an end to questionable transactions in property. It would also have a powerful impact on speculation in property. One thing is certain, with the promulgation of this Ordinance, transactions in or holding of a benami property would no longer be a profitable venture for the people who had been indulging in such practices for obvious reasons. □□□

(Courtesy: Spotlight, AIR)

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representation in all educational advisory bodies in the central and state levels.

(ix) state governments and central ministries have been requested to organise short-term orientation programmes for teachers, lawyers etc. from educationally backward minority groups for creating awareness of development programmes, especially programmes involving community participation in the fields of education, health, social welare and 20 point programme.

(x) all state governments have been asked to set up research units for making random sample surveys to assess the benefits of development programmes reaching the minorities in fair and adequate measure and to study other important minority problems. □□□

(Courtesy: Research & Reference Division)

BOOK REVIEW

Industrial Relations—Some Aspects
Compiled and Edited by [illegible]
Industrial Relations Adviser
Published by Secretary General PHD Chamber of Commerce and Industry, New Delhi PP [illegible] Rs.[illegible]

As the whole phenomena of industrial relations relates to formulation and application of rules and orders emanating from the provisions of the various Legislative Acts, defining the service terms and working conditions of workers, the industry in its own functioning has to be on the look out for not only keeping upto the spirit of its statutory responsibilities but also to effecting changes in the system that would be conducive to improvement of relations between the industry and its workers.

"The PHD Chambers of Commerce and Industry had been at work since 1975 to organise high-level discussions on the various aspects of labour laws and allied topics in the industrial relations field. A monograph entitled — Industrial Relations— Some Aspects, containing the resume of discussions for a period of two years was published in October 1977 followed by its II edition in March, 1978 and two reprints upto June 1979". Looking to the whole hearted response and keen interest shown by the member companies and strictly in deference to their wishes, now, after a lapse of time, the resume of meetings held from January, 1983 to November 1985, has been similarly embodied in the present monograph under the existing title.

In the midst of our democratic set-up and fast-developing economy new strategies now and then come to the fore which in turn give place to re-orientation in working conditions of workers for which realistic approach in evolving need-based changes in the existing provisions of laws etc. also become unavoidable. That is what has been taken note of in relation to the years 1977 to 1983 as also the period of discussions carried out from January, 1983 to November 1985. The resumes of the various meetings continued in this book are too comprehensive and too meaningful to leave out any important aspect of industrial relations. Both descripuve as well as statistical material in between the lines is worth reckoning. A study of the contents will surely testify to their veracity to all intents.

The compilation and editorial effort put into their work is highly commendable and it is because of that effort, that a high quality of readability has been ensured. Even for its good quality of production, the volume has been priced moderately.

Km. B. Khurana

Business Decision Making by Colin Gilligan, Bill Neale and David Murray, published by Heritage Publishers, New Delhi 1983 in arrangement with Philip Allan Publishers Oxford pages 197 Price [illegible].

The book makes analytical study of the factors which influence, with effectiveness, decision making process in business organisations. It deals, in detail, with the behavioural environment within the organisation and of the ways in which it is capable of affecting both the quality of decisions that emerge and the process of implementation. It deals with both quantitative or the behavioural dimensions of the decision process and how they interrelate. The way the whole thing is written with case studies, will surely help the readers to understand with greater depth, the decision making process at lower, middle and top level managers. The case studies at the end of chapters, charts, graphs and references for further readings are really helpful. The language and the style of expressions is a bit difficult and needs concentrated reading to follow. The book is not for casual readers. It is primarily for managers of middle level or students of management science.

The study of factors that go into short-term operating control decisions, periodic control decisions and strategic decisions and open systems approach in decision makings has been well discussed. The authors have condemned the traditional close system because it pre-supposes series of goals, towards which the whole organisation is working.

One theme which emerges throughout this book is the need for both behavioural and quantitative inputs to the decision making process. References, for detailed reading at the end of each chapter, are really very useful. The tables and graphs also help in clearer understanding of the subject. The case studies are of general nature and do not become absolute with the passage of time. The subject index is selective and of great help. The writers have both teaching and field experience in marketing, economics, accountancy and finance, hence take into consideration practical problems faced by any business organisation.

S.K. Nayyar

All the tales are not for children

Most of us would remember going to sleep on the lap of grand-ma, as children,while listening to the folk tales. Those folk tales of 'Pancha Tantra' and 'Hitopdesh' coming down the generations aimed at moulding the young listeners into responsible citizens of the future. They instilled a sense of values into the young minds and had no regional undertone as such.

Of the six pieces that comprises the present compilation of R.M. Bhat, 'Meena Gujari' alone has the regional setting of Gujarat. The story, however, reads more like a historical episode than a folk tale. Its ending

does not quite fit into the story. Meena, the pretty young wife of the chieftain of a warrior tribe was warned by her mother-in-law against visiting the court of the Mughal Prince who was camping near their village. But, so great was her desire to see the splendour of the Mughal Court that she, in disregard of her mother-in-law's warning, reached the court. There the lacherous prince first tried to lure her into his Harem. Having failed in his attempt, he then kidnapped her. Shortly thereafter, her husband fought with the Prince and rescued her. Returning home, she was however, refused a place in the family by her mother-in-law on the ground that she lived in the Harem. Then the story teller/author adds "Pure and Chaste, Meena rises in righteous indignation and ascends to divinity. Legend has it that she left the place and went to Pavegardh where she vanished and later came to be known as Mahakali". The tale of Meena Gujari, in contrast with the tales of 'Pancha Tantra' and 'Hitopdesh', each of which has only one message, has two messages; Meena was in for trouble because she disregarded the warning of her mother-in-law and that she ascended to divinity because she was pure and chaste.

The other stories of this compilation for instance 'An Innocent Girl', 'The Mystery of Jaladhari', 'Good is Good, Evil is Evil' and 'The Magic Ball' are, however, quite absorbing and hold the charm till the end. The wholesome message that each of these tales seek to convey has been clearly driven home to the reader/listener. While telling these stories R.M. Bhat has exercised restraint which is characteristic of a good story teller. In these, he began where he should and stopped exactly where he ought to. However, the tale 'There is a Divinty that shapes our Ends', though beautifully told, is not in tune with the rest of the tales. It does not instill into the mind of the young reader/listener the permanent values rather it seeks to enshackle his mind into believing that fate is the ultimate arbiter of one's destiny. In this age when invinsibility of the spirit of man is heralded, is it justified to give such dampening massage, particularly, to the children?

Folk Tales of Gujarat-By R.M. Bhat (Publications Division, Ministry of Information and Broadcasting) Price- Rs. 8.00

Dilip Kumar Ghosh

Composite Culture and Indian Society:— "Problems and Prospects of Integration"—publication sponsored by the Dr. Zakir Hussain Educational and Cultural Foundation—published by VICHAR

The above book is an important addition to ones, written on modern Indian society and problems of national integration. The papers in this collection have been written by a band of well known scholars, peoples representatives and bureaucrats, thus providing an all India perspective. What assists the insights they provide is that their contributions often differ in view points and theoratical perspectives.

This publication has been very timely. Today when the country is faced with disruptive tendencies, like communalism, provincialism, stateism and casteism, the debate on natural identity, on composite culture assumes great importance.

The book has been divided in two volumes I and II. Volume I consists of twenty essays written by the contributors while in Vol. II the contributors are engaged in a debate.

The first four papers contributed by Shri Rasheeduddin Khan, Shri Wahid Ul Malik, Shri Krishna Kripalani and Shri Harjeet Gill bring out the underlying theme of unity in diversity, of common heritage and of composite culture in the Indian culture.

Shri B.D. Nagchaudhari in his paper "National identity in multi-lingual society' brings out the problem of nation building in our country where so many regional languages and dialects are spoken. However the author does not throw light on the root cause of tensions caused on the language issue—which is the reorganisation of states done in 1956 on linguistic grounds. If the reorganisation of States had been done on geographical basis as in the U.S.A., this problem of language tension would never have arisen. The author has praised the Russian Govt. which despite being very centralised has taken care in letting various language and ethnic groups evolve their approach to the problem of all union communication. However it may be pointed out that indigenous protest has been expressed now and then by many non Russian republics of Baltic and Central Asia. Ethnic disturbances in Azerbaijan, Uzbekistan in the form of separatist demands, and dissatisfaction with russification policies of the Govt. are pretty common.

The vol. II, where the contributors and other well known peusonalities like Dr. Karan Singh. Mrs. Kamla Devi Chattopadhyaya engage in a debate on the issue of composite culture, the problems of national integration in Indian society and other related problems has been presented in very lucid style.

On the whole the book makes an interesting reading not only to a student of Indian society or polity but even to a layman who is confused when he sees, the unity of the country being threatened by numerous centrifugal forces.

Kirti Saxena

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common man for his development. The present controversy on the relationship between the role of these organisations and development springs from this point. If the existence of these institutions is to be justified as institutions promoting development, they must have to work with the people for their economic and social development, thereby minimising the problems of rapid increase of population and growing unemployment. Moreover, they should work for organising the people for the betterment of their conditions and not for nurturing their own vested interests. □□□

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Criket Championship in Australia in 1984 and then went on to win the Sharjah Cup.

India organised the World Cup in India in 1987 and was expected to win it again. India made the semi-final grade and lost to England in the semi-finals of the Reliance World Cup.

After the Reliance World Cup India was badly mauled by the West Indies but they came back fighting in the Sharjah Cup which they won with out much efforts.

Promotional efforts

With the formation of the Sports Ministry Indian sports are bound to make more progress as there is going to be planned policy to give impetus to sports in the country. This is more so after the successful staging of the IX Asian Games in New Delhi. With big stadia coming into existence there is bound to be more interest created amongst the youngsters in time to come.

The Government had earlier created a National Institute for Sports with its main office in Patiala. It has many more branches in East and South and now with the creation of the Sports Authority of India the NIS has been merged with the SAI. The Sports Authority of India is having some ambitious schemes for the promotion of sports in the country. All over the country they have launched a National Talent Hunt Scheme whereby the promising youngsters are picked mainly on the basis of their performances during the competitions and the selected few are being sent to various schools adopted by the Authority.

These youngsters are being provided with free education and special coaching is also being imparted through specialised coaches. The scheme is young and it is difficult to visualise the results at the present but with time to come it is bound to produce good results.

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designers and the teachers should not forget, at any stage, that the family environment of socially and economically backward children limits their perceptual concept and linguistic experience in their formative years and thus prepares them poorly for school. A school programme developed for middle income group children and the methods of teaching based on usual approach may hardly be successful for these children.

I understand that to develop a separate curriculum for the disadvantaged children or to run a non-formal or compensatory educational programme exclusively for them is a costly affair and not conceivable at present. I, therefore, do not ask for either of two reforms. The only suggestion I would like to make, is to think of a possible change in the methods of teaching and the medium of instruction for economically and socially disadvantaged children of the Muslim community. Within quotes I plead, 'Give them back their language.'

While recommending for this change I am quite clear in my mind that a child from economically backward Muslim community begins to face many problems, the moment he enters the school. He has a low self-concept compared to majority group. As such what he experiences in school reinforces his feelings of inadequacy. A Muslim child has values but his values usually conflict with the values at school. Such a conflict puts the child in a state of confusion. He speaks a different language at home, his communication skills become limited, he therefore, relies more on non-verbal communication while the entire structure of the Indian school demands verbal communication. These limitations go in support of my assumption that the teaching style of the children of this group should be different from that of other communities. It is because of these reasons, I conclude, that the teaching style for these children should be welladapted to the learning styles of the children of this minority. □□□

(Contd from page 28)

and if by chance, any epidemic breaks out, the medical treatment is immediately given. In order to improve the living conditions of the people, smokeless chulhas have been introduced. Gobar gas plants have been started and the glass tiles for better lighting have been introduced. Sixteen balwadis have been started and primary students are given free textbooks. Ashramshala in Vadeshwar has been started and expert teachers from Pune come on the weekends to give special coaching to the students in English, Mathematics and Science. In order to attract the young generation to this area, poultry farm has been introduced. The Sevadham Trust has started a novel way of under lining the importance of small family norm.

Popularising small family

Kirtan is a popular folk art in Maharashtra. A local folk poet has written many features underlining the importance of small family and immunisation etc. Whenever Kirtan programme is announced, hundreds of people pour in to listen to his sermons.

The Dindi is a popular march to Pandharpur and Alandi at the time of religious festival. This Dindi consists of hundreds of pilgrims who sing their way to the temple. Sevadham has taken advantage of these devoted people and ask them to sing songs over the eradication of blind superstitions, immunisation etc. These people sing the songs from village to village. In the evening, they take rest in some village where the villagers offer them food and shelter. The next day, they again start their pilgrimage. Sevadham has thus innovated the ways to reach people. This is surely a novel way to achieve the goal of health for all by the end of the year 2,000. The people's participation has paid rich dividends so far and Pune Zilla Parishad is very proud in announcing so. □□□

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What banks have done for rural development

J.S. Varshneya

In this article the author reviews the role played by the commercial banks in the upliftment of rural areas. Banks, which were essentially urban-oriented, have displayed remarkable flexibility to adjust in rural areas and have contributed their mite towards their development. Full development, however, calls for a multi-pronged approach—economic, social and political—in which the Government, financial institutions and social/voluntary organisations must work in close coordination, the author feels.

UPLIFTMENT OF THE RURAL AREAS IS crucial to socio-economic development of the country. 'India lives in Villages' said Gandhiji about half-a-century back but this is true of today too. According to census 1981, nearly 77 per cent of total population lives in the rural areas comprising 5.76 lakh villages. The dominant occupation of the rural population is agriculture and allied activities. In 1981, this category engaged 66.5 per cent of the country's workers—41.6 per cent cultivators and 24.9 per cent agricultural labourers. Agriculture and allied activities contributed about 37 per cent to net domestic product. Besides, farm sector contributed one fourth to the total exports. In fact, rural sector contributes to the economic development of the country by providing (i) product contribution in the form of expanding flow of increased food supplies; (ii) factor contribution in the form of labour force, raw materials, foreign exchange by export of primary products; and (iii) market contribution i.e. domestic market for the industrial products which is possible through a rapid increase in agricultural output and productivity resulting in high income generation of the rural population.

Development of the rural sector in general and the agriculture in particular, has engaged the attention of the planners right from the advent of planning. Each successive Five-year plan laid emphasis on the same. Thus, it came to be realised that in the Indian economic setting development and planning has little meaning unless it is in one way or the other connected with the process aimed at improving the rural sector and the lot of the man in the villages. As a result of this, there has been a perceptible improvement in as much as we have not only become self-sufficient in foodgrains production but also produce enough to build up a buffer stock so as to meet any shortfall in the overall production at the time of any natural calamities. There has been a significant decline in the percentage of population living below the poverty line-it declined from 48.3% in 1977-78 to 37.4% in 1983-84 for the country as a whole. For the rural sector, it declined from 51.2% to 40.4% during the corresponding period. The main reasons for this welcome trend are the higher rate of economic growth and the increase in the agricultural production. However, there is no room for complacency. There are as many as 272 million persons in the country who still groan under poverty, the bulk i.e. 81% of whom live in the rural sector. The benefits of economic development have yet to fully percolate to this vulnerable section of the society. In fact, any development effort will remain lopsided unless the rural India prospers and the man below the poverty line is emancipated from the shackles of poverty. For accelerating rural development and uplifting the rural areas, the following strategy and methodology, as outlined in the Five-year plans, needs greater attention:—

(i) increasing production and productivity in agriculture and allied sectors;
(ii) resource and income development of vulnerable section of rural population;
(iii) skill formation and skill upgrading programmes to promote self and wage employment amongst the rural poor. This will bring down pressure on land and check migration to urban areas;
(iv) promoting marketing support to ensure the viability of production programmes and to insulate the rural poor from exploitation in the marketing of the products;
(v) provision of additional employment opportunities for gainful employment during the lean agricultural season.

Role of commercial banks

For long, it was realised that the banking system has

an important role to play in the upliftment of the rural areas. As the banking system in India was predominantly urban oriented and essentially catering to the credit needs of the industry and wholesale trade, there was a lukewarm response for moving to the rural areas and make advances to the hither to neglected sectors. The nationalisation of the erstwhile Imperial Bank of India (renamed State Bank of India) was the first positive step in the involvement of the commercial banks towards rural banking, but, it was not until Social Control of banks in 1967 that the role of banks as agents of development became explicit. The exact nature of this role has taken shape through a process of evolution. Nationalisation of 14 major Indian Scheduled Commercial Banks in July 1969 imparted a revolutionary push in making the banking system to meet the credit need of the hitherto neglected sector within a time-bound framework, achieving pre-determined goals and establishing balanced branch network in the rural areas. The 'hitherto neglected sectors' gradually came to be called the 'priority sectors'. With a view to extending the bank credit to the most vulnerable sections of the society, sub-categories like 'weaker among the weak' for purpose of DRI Credit) and the 'Weaker Sections' (for purposes of IRDP Credit) were identified. This evolution goes on and now individual branches of banks are being made exclusively responsible for meeting the credit needs of a group of villages under the recently formulated Service Area Approach. Under this Approach, planning for credit is carried forward to the grassroot level. A review of the role played by the commercial banks in the upliftment of the rural areas is presented below:

The Lead bank scheme

The Lead Bank Scheme was introduced by Government/RBI towards the close of 1969 with the objective of providing banking services in rural/tribal areas, opening of bank offices in the unbanked and under-banked areas, assessing the credit requirements—particularly of the weaker sections of the society and building up a system which would be complimentary and supporting the Government's efforts for rapid economic development taking district as a unit.

Under the Scheme, all the districts in the country (except Metropolitan cities of Bombay, Calcutta and Madras and certain Union Territories) were allotted to various banks. The Lead Bank was to act as a consortium leader for coordinating the efforts of all credit institutions in the allotted districts for expansion of branch network and for meeting the credit needs of the rural economy.

In the first phase, Lead Banks conducted impressionable district surveys of the lead districts and identified growth centres for purposes of opening of bank offices. This resulted in massive branch expansion in unbanked areas. The number of rural branches increased from 1832 in June 1969 to 30585 in Dec. 1987. In percentage terms, this constituted 22.2% of total branch network in June 1969 and 56.2% in December 1987. More importantly, out of 46169 branches opened between June 1969 and December 1987, as many as 28753 or 62.3% were opened in rural areas. This massive branc[h] expansion brought down the average size of populatio[n] served by a bank branch from 65000 in June 1969 t[o] less than 13000 by December, 1987.

Increasing flow of bank credi[t]

Increased thrust on rural development and openin[g] of a sizeable rural branch network facilitated th[e] increase in the flow of credit to the rural sector. In Jun[e] 1969, rural sector accounted for a meagre Rs. 54 crore[s] of credit constituting 1.5% of total bank credit whic[h] increased to Rs. 11127 crores or 15.3% of total credit i[n] December, 1987. For ensuring a sustained flow of ban[k] credit to the rural and semi-urban sectors, and also t[o] correct the regional imbalances in this area, th[e] Government/RBI stipulated that the bank should atta[in] 60% CD Ratio, in these areas, separately.

Target oriented approac[h]

In the post-nationalisation phase, the thrust of cred[it] dispensation has been towards the neglected sectors which were accorded 'priority status'. The priorit[y] sector includes Agriculture, Small Industry, Smal[l] Transport, Retail Trade, Small Business, Professiona[l] & Self-employed persons. The banks were asked t[o] follow a 'Target Oriented Approach' in advancin[g] credit to these sectors. Initially, the targe[t] was placed at 33.3% of the total credit, which wa[s] subsequently raised to 40%. As larger number o[f] beneficiaries for these sectors belong to the rural areas credit dispensation to the priority sector represents th[e] bulk of the bank credit to the rural sector. In June 1969 the advances of public sector banks to the priorit[y] sectors amounted to Rs. 441 crores spread over 2.6[0] lakh borrowal accounts. As percentage of total credit the same was 14.9% at that time. In September, 1987 total PS Credit of the public sector banks incresed t[o] Rs. 25870 crores covering 287.02 lakh borrowa[l] accounts. As percentage of total credit, the sam[e] constituted 45.3% The sectorwise position of increas[e] in credit to the priority sector by public sector banks, i[s] shown in the table below:—

(A/cs in lakhs
(Amt. Rs. crores

	June 1969		Sept. 87	
	A/cs	Amt	A/cs.	Amt
Agriculture	1.64	162.3 (5 5)	182.1	1093[illegible] (19.2
Direct	1.60	40.2 (1.4)	173.0	956[illegible] (16.8
Indirect	0.04	122.1 (4.1)	9.1	136[illegible] (2 4
S.S.I.	0.51	251.1 (8 5)	20.5	939 (16.5
Others	0.45	27.6	84.4	554[illegible] (9,7
Total:	2.60	441.0 (14.9)	287.0	2587[illegible] (45 3

Note: Figures in brackets indicate percentage to total credi[t]

Thus, it is seen that public sector banks credit to priority sectors registered a jump from Rs. 441 crore or 14.9% of total credit spread over 2.60 lakh borrowal accounts to Rs. 25870 crore or 45.3% of total credit spread over 287.0 lakh borrowal accounts in Sept. 1987. Sectorwise also, there is a perceptible increase in priority sector credit dispensation by PSBs, which has helped the rural poor in upliftment.

It is also to be seen from the above table that the public sector banks taken together exceeded the stipulated national goal of 40% and also the goal of 16% (since raised to 17%) of total bank credit in respect of direct credit to agriculture.

Concern for the weak

Though the stress on increasing the flow of credit to the priority sector itself represented the thrust on extending credit assistance at relatively lower rates of interest to the economically weaker sections of the society, it was seen that there were many among them, so poor that they could not avail of the facility. Thus came a stage when it was felt that they be accorded a differential treatment in this ragard. This led to formulation of Differential Rate of Interest Scheme in 1972 which was the first step to assist the weaker among the weak The scheme aims at providing loan assistance to the most vulnerable sections of the society for taking up any economic activity wich would generate some income. Such credit assistance carries concessional 4% rate of interest. The eligible beneficiaries include persons engaged in elementary processing of forest produce, such as wood cutting, those who collect fodder in difficult areas, persons engaged in cottage/rural industries on modest scale, orphanages and women' homes where saleable goods are made. The Scheme lays a major emphasis on extending 40 per cent of such credit through rural and semi-urban offices. It is also stipulated that financial assistance under DRIS should not be less than 1 per cent of bank's total credit (it was 0.5% earlier)

Public sector banks credit assistance under the Scheme has increased from Rs. 87.3 lakhs (0.02% of total credit) spread over 262.02 borrowers in Dec. 1972 to Rs 580 crores (1.1% of total credit) to 48.34 lakh borrowers in Sept. 1987 The SC/ST borrowers accounted for Rs 294 crores of DRIS credit spread over 23.62 lakh borrowers in September 1987. This growth represents a major breakthrough in extending credit support to the weakest among the weak.

Integrated Rural Development Programme (IRDP)

As mentioned earlier, the development of the rural areas has been one of the abiding concerns of the successive five-year plans. A number of programmes were formulated from time to time for improving the economic conditions of the rural poor. Though none of the programmes covered the whole country, yet a large number of blocks had more than one programme operating simultaneously in the same area for the same target groups. This territorial overlap and also the funding patterns of the programmes not only created difficulties in effective monitoring and accounting, it often blurred the programme's objectives. It was therefore, deemed appropriate to combine these multiple programmes operated through multiple agencies into one programme named as Integrated Rural Development Programmes (IRDP) operated through only one Agency viz. District Rural Development Agency (DRDA).

The IRDP is to be seen as an instrument for eradicating poverty in the rural sector. The programme of asset endowment under IRDP is designed to develop self-employment ventures in a variety of activities like agriculture, animal husbandry and land-based activities in the primary sector; weaving, handicrafts, etc. in the secondary sector; and service and business activities in the tertiary sector.

The identification of beneficiaries is done by DRDA who also select their activity, provide the necessary back-up support, including subsidy and supply the asset required for pursuing the activity. Banks provide the needed credit support for purchase of assets on the basis of allocation of shares to each bank operating in the area/block. Every year, 600 families below the poverty line are to be identified for assistance in each block based on incidence of poverty line. The target for Seventh Five-year Plan is 20 million families.

In terms of financial target, the total allocation for the Sixth Plan was Rs. 1500 crores, which has been increased to Rs. 3000 crores during the Seventh plan. The banks are to meet the credit requirements to the extent of Rs. 4000 crores. During the Sixth plan, 166 lakh beneficiaries were covered under IRDP who were disbursed a total of Rs. 31 01.6 crores by all financial institutions. Out of this, bank assistance accounted for more than 72 per cent. During the Seventh Plan (upto Feb. 1988) 101 lakh beneficiaries have been disbursed a total of Rs. 2335.58 crores and the banks' share is 98 per cent.

The 20-Point Programme

Whereas the Integrated Rural Development Programme has its entire focus on the upliftment of these vulnerable sections of the society who are below the poverty line and live in the rural areas of the country, the 20 Point Programme is a total attack on poverty. It is a concept for eradication of poverty; philosophy for removing social disparities; and a panacea for improving the quality of life. The programme was first outlined by the late Prime Minister Smt. Indira Gandhi in July, 1975 and revised in January 1982 and was restructued by Prime Minister Shri Rajiv Gandhi in August 1986. The third restructured 20-point Programme lays total emphasis on rural development and poverty alleviation. It renews the Government's commitment towards eradication of poverty; raising productivity; reduction of inequalities of income; removing social and economic dispartities and improving the quality of life. It provides for bigger harvest, enforcement of land reforms, energy for the

village, justice to scheduled caste and scheduled tribes, housing for rural poor, improvement of slums, protection of environment, new strategy for forestry, equality for women, health for all, expansion of education, concern for consumer and a responsive administration.

Since the inception of the programme, it has been recognised that the banking system has a vital role to play in its implementation by providing the needed financial support. In conformity with this expectation public sector banks have played a very important role in directing the flow of credit assistance to the 20 Point Programme beneficiaries. Under the programme public sector banks have assisted 192.20 lakh persons to the tune of Rs. 8346 crore upto September, 1987, and thus, lifting a large number of poor above the poverty line.

Weaker sections

The 20-point programme brought in its wake a new concept of weaker sections within the priority sector. This concept was evolved by the two working groups, one set up in 1980 and the other in 1982 for articulating the modalities of credit assistance by banks to the beneficiaries of the 20-Point Programme. The working groups identified and defined the weaker sections within the priority sector for purpose of imparting greater thrust on diverting the flow of bank credit to such sections. The weaker sections include beneficiaries under IRDP, DRI, SEPUP, Small and marginal farmers, artisans, village and cottage industries and SC/ST beneficiaries. The national goal stipulated for purpose of the credit assistance to weaker sections is 10 per cent of total credit.

Banks have adopted a number of measures to ensure steady flow of credit assistance to these hitherto neglected sections of the society. Special care has been taken to identify industrially backward areas which are rich in traditional arts and crafts and suitable schemes have been formulated for extending financial assistance to these weaker strata of the society. Similarly, areas having concentration of schedulded castes/scheduled tribes borrowers have been located and special campaigns/mass loaning functions are organised to enable them to extricate themselves from the morass of poverty. As on Sept. 1987, PSB's assistance to weaker sections amounted to Rs. 6506 crores covering 205.32 lakh beneficiaries. The credit to weaker sections as a proportion to total credit was 11.1% and exceeded the stipulated national goal of 10%.

Regional Rural Banks

A review of the role of commercial banks in the up liftment of the rural areas is incomplete without a special mention of the Regional Rural Banks. These banks emerged on the banking scenario in 1975 combining in them the local feel of the cooperatives and operational efficiency of the commercial banks. RRBs are small sized low cost banks whose operations remain restricted on an average to two districts only. They extend credit facilities to the weaker sections and large borrowers such as whosesale traders, large and medium industry, Farmers with large land holdings do not fall within the scope of their lending operations.

As of June 1987, there were 196 RRBs in the country covering 362 districts with 13076 offices. The aggregate deposits of these banks amounted to Rs. 1910 crores in 209 lakh accounts. Their advances were Rs. 1934 crores spread over 89 lakh borrowers. Their overall CD Ratio was 101.3% signifying the amount deployed by these banks exceeds the amount of deposits mobilised by them in the rural areas. This is a major step towards checking the flight of financial resources from out of the rural sector and a correct step to correct the regional imbalances.

Service area approach

As stated earlier, formulations of different programmes for the upliftment of the rural areas followed an evolutionary process, i.e. one improving upon the other and filling gaps in the earlier programmes. In late 1987, the entire gamut of rural lending programme came under sharp focus which resulted in the formulation of service area approach to rural lending. It was felt that the existing rural credit delivery system needed revamping with a view to improving the quality of lending and ensuring that the bank credit is used for increasing production, productivity and income levels of rural people. It was also felt that with the establishment of a large network of branches in the rural and semi-urban areas, the time was opportune to adopt a system of assigning specific areas to each bank branch in which it can concentrate on productive lending and, thus, contribute to the development of the rural areas. In terms of RBI guidelines, the following strategies would be implemented by the banks within the stipulated time frame:

(i) Designated service area comprising 15-25 villages will be allocated to all rural/semi-urban branches of commercial banks and RRB branches by June 1988.

(ii) Branch Managers will conduct extensive survey of the villages allocated to them and prepare village profiles within 4 months of allocation of service area.

(iii) Branch Managers will prepare annual credit plan for deployment of credit in each of the village in the service area keeping in view the potential and needs of the concerned areas.

(iv) A Block Level Banker's Committee will be constituted in each district and the committee will discuss from time to time the action plan of bank branches, ensure availability of linkages, review progress of implementation of Govt. sponsored programmes and sort out operational problems arising out of the implementation of credit plans.

The new dispensation is expected to bring about the desired changes in the quality of rural lending, minimising some of the constraints experienced in present day

rural banking scene. The concept also attempts to reorient microlevel planning with a bottom to top approach in the context of rural banking, which has not been tried hitherto.

Problems & perspective

The upliftment of the rural areas is an uphill and an on-going task. The problem is so colossal that each programme has been falling short of expectations in its process of implementation and with the passage of time it calls for modifications and improvement. In fact, the development of the rural sector needs a multi-pronged approach - economic, social and political. There has to be close coordination among the various agencies, viz. Governments - State and Central, financial institutions including banks and voluntary and social organisations interested in rural development. Financial institutions and banks can provide most needeed financial support but the responsibility for providing back-up support devolves on the Govt.

Availability of adequate infrastructure is a pre-requisite for socio-economic development. This infrastructure includes development of roads and transport facilities, postal and telecommunication facilities, supply of electric power, public health services including supply of drinking water, education facilities, and security measures,etc. These are essentially to be provided by the Govt.-State and Central.

With the increase in population, there is a continued pressure on land in the rural areas resulting in sub-division of holdings, rendering each sub-holding economically unviable. There is need to restrict this sub-division of holding through legislative measures. Besides, there is a need to integrate the sub-divided unviable holdings into viable entities. For this purpose, banks can provide necessary credit facilities. These measures would discourage litigation, which engages large number of rural families and places them under financial and economic strain.

As mentioned above, with the increase in the population and labour force, there is a pressure on land. In order to overcome this problem, it is necessary to create job opportunities in the non-farm sector. This will lay a greater stress on development of Small Scale Industries and Cottage Industries in the rural area. It will also be necessary to ensure adequate marketing facilities so as to make these ventures viable. This measure will not only relieve pressure on land but also check migration of population to the urban sector which is already a major-economic problem as a result of large growth in population.

With a view to improve the quality of life in the rural areas, congenial conditions are to be created to lure the rural intelligentia to stay in their original habitat. Besides, it would go a long way in improving the quality of life in the rural sector if efforts are made to attract retired high officials, zealous social workers to stay in the countryside. Such like people could have a beneficial impact on the rural population. For attaining this objective, provision of facilities in terms of reading material, living accommodation with reasonably good boarding facilities, medical facilities is necessary. In fact, in the present social environment, these high officials and intellectuals do not need much financial support, but they need proper infrastructure in the countryside and a place of respectability. Their services and their past experiences could be made use of in the rural areas for bringing out realistic, relevent, pragmatic plans providing for utilisation of human resources, etc.

The rural areas also need improvement in the creation of recreation facilities, which is a concomitant part of better living. This measure will be an additional factor for the intellectuals/intelligentia to be lured to stay in the countryside and the expenditure incurred thereby would remain within the rural areas to be used for development purposes. People in high income groups in the rural and urban areas should be encouraged to make investments in the rural sector. There are certain voluntary agencies interested in such investments but they need forward and backward linkages to ensure that their investments are secure and also productive.

Conclusion

In conclusion it may be said that the Banking System has displayed a remarkable flexibility to adjust to the changing environment. Banks which were essentially urban oriented, catering to the elite sections of the society have extended their operations to the country-side and emerged as a catalyst of growth in general and promotors of development and upliftment of the rural areas in particular. As a first step, Banking System, under the Lead Bank Scheme, expanded the branch net work deep into the countryside and thus took the banking infrastructure to the doorsteps of the common man. This was followed by a thrust on increasing the credit flow under a targetted approach, i.e.CD Ratio of rural branches should be 60% and above. Special care to meet the credit needs of the poor was ensured again through a targetted approach by increasing the flow of credit to the specific priority sectors, specially agricul ture-Direct & Indirect. Through a process of evolution, one programme followed another, placing greater thrust on poverty allevation. Under these poverty allevation programmes, banks diverted flow of credit to the weaker among the weak. Under the IRDP, banks took a keen interest to bring the people above the poverty line. The latest development and the increased role of banks is that each branch in rural and semi-urban areas will be assigned a specific number of villages for meeting their total credit requirements This process is going on and it is hoped that the Banking System will again emerge very successful in contributing its mite towards the upliftment of the rural poor. ❑❑❑

Government must help banks to recover dues !

Dr. N.K. Thingalaya

Expressing his concern over the mounting volume of bank overdues, the author says the enactments of the State Governments have not been really effective in supporting the recovery drive of the banks. The banks also have failed to maintain their standard of post-sanction supervision and counselling the borrowers, largely as a result of the increase in the volume of advances handled. It would, therefore, be desirable, the author feels, to make the State Governments to appreciate Banks' responsibility of recovering their dues. He suggests enactment of legislation by the State Governments on the lines obtaining in the States of U.P., Kerala, M.P. and Haryana for the recovery of bank's dues.

SINCE THE NATIONALISATION OF MAJOR banks in India in 1969, the banking industry has travelled a long way to emerge as one of the accredited agencies of rural development. The various policy measures adopted by the Government of India, as well as the Central Banking Authority, have been responsible for bringing about this transformation. The deliberate slant in the branch licensing policy, favouring a thrust on rural branches, accelerated the process of the spread of banks in the rural areas. Though the adhocism rather than long-term perspective guided the policies of the state, the demands made on the working of banks compelled them to accept rural development as a part of their policy goal. The reluctant novice in rural credit was then saddled with a number of policy directions necessitating its larger involvement in the economic life of rural India. A number of state-sponsored schemes have also been introduced. Specific roles have been assigned to the banks to extend credit for various developmental programmes. Certain innovations are also made in rural lending. A new credit agency namely Regional Rural Bank is also set up by the public sector banks to augment the flow of rural credit. The banks in general, have attempted to gear up their machinery to cope-up with the growing demands made on them. Some of the operational problems, which have cropped up as a result of rapid expansion in rural lending are analysed in this article.

The banking industry has built up a fairly strong rural banking base during the last 18 years. The locational imbalances in the spread of banking facilities have been reduced to some extent by the growth of the rural branch network. In accordance with the functional diversification, a few structural reorganisations have also been made by the banks. They have been able to build up the necessary expertise to manage the new role responsibilities. A review of the emergent rural banking base may be made on the basis of data furnished in the table.

Table-1

The Rural Banking Base-Key-Indicators

Indicators	*June 1969*	*Dec. 1987*
1. Rural Branches (Numbers)	1505	16,974
1.1 Share in Total Branches (%)	22.8	46 1
2. Rural Deposits (Rs. Crores)	145	15,033
2.1 Share in Total Deposits (%)	3.1	14 1
3 Rural Credit (Rs. Crores)	54	8,836
3.1 Share in Total Credit (%)	1.5	13 9
4. Agricultural Advances (Rs. Crores) (Direct)	40	9,029

The figures presented in the Table provide an impressive glimpse of the performance of the banks in the field of rural banking. During the period 1969 to 1987, the number of rural branches has increased from 1505 to 16,974. The share of rural branches in the total branch network of the public sector banks has doubled from 22 per cent to 46 per cent. The volume of deposits mobilised by the rural branches which constituted only 3.1% of the total bank deposits in 1969 has increased to 14.1 per cent in 1987.

In the field of rural credit deployment, the amount of credit lent by the public sector banks has increased from a paltry sum of Rs. 54 crores in 1969 to Rs. 8836 crores in 1987. In relative terms, the share of rural credit has increased from 1.5 per cent to 13.9 per cent. The direct lending to the agricultural sector has shown a phenomenal increase from Rs. 40 crores in 1969 to

Rs. 9029 crores in 1987. There is an improvement in the utilisation of the resources mobilised in the rural areas for deployment locally. The credit-deposit ratio has increased from 37 per cent to 57 per cent.

A second tier of rural banking base has been created by the regional rural banks sponsored by the banks. The number of regional rural banks operating now is 196. These banks have opened 13076 branches in their command areas. The centres chosen by them are mostly the second order centres where the parent banks would not open their branches. The regional rural banks have mobilised Rs. 1909 crores as deposits and have lent Rs. 1933 crores for various purposes to the small and marginal farmers.

The details of progress made by regional rural banks are given below:

Table-2

Progress of regional rural banks

(As on June 1987)

(Rs. in crores)

	Indicators	No of Accounts (in Thousands)	Amount
1	Deposits	20871	1909.68
2	Advances	8929	1933.53
	(i) Crop loans	1787	324.11
	(ii) Term loans	3049	737 06
	(iii) Rural artisans, village & cottage industries	729	125.37
	(iv) Others	3364	746.99

There are some evidences to indicate that to improve the qualitative aspects of the rural lending programmes, new agencies have been fostered by the banks. Innovations in the form of Agricultural Development Branches (ADB), Grama Vikas Kendra and Farm Clinics have been introduced by some of them. Expertise in managing the rural branches has been built up. Specialists like agricultural development officers and farm extension officers have been recruited and deployed in the operational units. Over 78,015 bank employmees, accounting for 14.5 per cent of the total bank personnel, are operating in the rural branches.

The banking industry has now built up a rural base which did not exist in 1969. It has expanded its rural resource base both in terms of the financial and human resources. Thus, it appears to be equipped with the wherewithals to take up the task of rural development. However, it would be too presumptuous to talk about the adequacy of this base. It has to be expanded further to improve the effectiveness of its delivery system.

Some emergent issues

The phenomenal expansion achieved by the banks in their rural operations have created a few problems. The problems may be classified as organisational and procedural having wider ramifications on the operating results of the banks. They have mainfested in different forms causing concern to banks. Some of these operational problems which are commonly observed are listed below. A detailed analysis of each of these problems is not attempted.

There are evidences to believe that rural credit has been able to bring about some tangible transformations in the economic conditions of the farmers. This is particularly so in the case of big farmers and partly so in the case of small farmers. The marginal farmers and the agricultural labourers are the two classes of the rural society who have reaped very little of the desired benefits out of the various rural lending programmes. This is largely on account of their inherent deficiencies, like the smallness of the holding or the lack of it in the case of agricultural labourers. It is, perhaps, too much to expect the small doses of credit to bring about a remarkable change in their cases. Whatever be the extent of state subsidy associated with these lending programmes, they cannot generate adequate income to improve their economic conditions within a short period. It would take a longer period and would require further doses of credit.

Regarding the quality of lending, it must be admitted that there has been some amount of dilution of the credit norms out of necessity and compulsion. When dealing with the large number of rural households who are being brought to the banking fold for the first time, the banks cannot afford to stick to their set commercial norms. These norms, sometimes, had to be scaled down, the procedures had to be simplified and the documentation had to be made faster. This process has naturally resulted in the deterioration of the supervision and monitoring of lending. Some amount of laxity on the part of the supervisory staff at the field level is also noticed. However, the corrective measures are being initiated by re-formulating the credit norms and re-designing the procedural formalities. The observance of Non-Public Business Working Day is one of the means adopted for improving the house-keeping and documentation. It is however too early to pass a judgement on its utility.

The flow of applications from the beneficiaries under the Integrated Rural Development Programme has increased to such an extent as to create problems of verification, documentation and credit dispensation. One of the major lacunae of the programme is the "target-orientation" of the sponsoring agencies. The emphasis has been misplaced on achieving physical target and on disbursing the amount of subsidy as a part of the total plan formulated for the state. The obsession with the targets has failed to take cognisance of the absorption capacity of the command area of the branches where the programme is launched. In many cases, wrong identification of the beneficiaries has rendered the whole scheme uproductive, thereby creating further problems for both the lender and the borrower.

The borrowers or rather the would-be borrowers are becoming increasingly aware of the various schemes available in the rural branches. The availability of the subsidy is an added attraction to a majority of them to

avail of the credit facility. Instances are innumerable where the borrowers are found to be applying for larger doses of credit for the simple reason that proportionately larger quantum of subsidy would be available to them. It is desirable that the subsidy should be passed on to the borrower only after the successful completion of the project as envisaged, rather than releasing it to him along with the loan component. It is common knowledge that the availability of subsidy has induced the unscrupulous borrowers also to purchase and sell animals, pocketing the subsidy. This is true also in the case of advances made for sheep rearing or goat rearing. Instances are not uncommon where even the simple tribal people who are otherwise not aware of the means of deceiving the banks, indulge in misutilising the credit given for sheep rearing.

Poor recovery in rural lending was the bane of the co-operative credit system in India. The commercial banks are now facing the mounting volume of overdues. The crop insurance or the cattle insurance have only been the minor palliatives. Making an allowance for the nature's vagaries and the crop cycles, one gets an impression that the wilful defaults are on the increase. The enactments of the State Governments have not been really very effective in supporting the recovery drive of the banks. The banks also have failed to maintain their standard of post-sanction supervision and counselling the borrowers, largely as a result of the increase in the volume of advances handled. It would be desirable to make the State Governments appreciate their responsibility of recovering the bank's dues.

General experience of the bankers is that the required assistance is not forthcoming from the Revenue Department in recovery work. It is therefore necessary to consider that the State Governments have to enact legislation on the lines obtaining in the States of U.P., Kerala, M.P., and Haryana. In these cases, the rules are simple in the sense that the bank branches can make a simple application to the Sub-divisional Magistrate to recover the dues of the banks as "arrears of land revenues". Legislative support is also necessary to prevent the wrongful disposal of the assets created out of the loans obtained from financial institutions and the subsidies availed from the state. Rajasthan is reported to have have made a beginning in this direction. Other states are yet to take note of this need.

The Lead Bank Scheme has been indirectly helpful in augmenting the flow of rural credit through the implementation of the Annual Action Plans. It has also been instrumental in bringing about a better rapport between the bankers and the Government agencies. It has created a forum for the district level functionaries to examine the operational problems of the bankers. It has, however, failed to dovetail scientifically the State level programmes with the performance budget of the banks. The bank branches have not been able to utilise the Annual Action Plan in drawing up their own branch level plans. Non-availability of the Annual Action Plan on time is one of the reasons responsible for this situation. Most of the problems of credit management have cropped up mainly on account of the sporadic lending which is outside the framework provided by the credit plan. The 'Service Area' concept which is now being implemented would be useful in generating village-wise credit Plans. The aggregation of these plans would be the district credit Plan. Once it is finalised, strict adherence to it should be insisted upon and adhoc additions should not be made by any state agencies.

The regional rural banks are expected to have a low cost profile and develop a 'banking style' which is readily acceptable to the rural masses. They are also expected to evolve strategies to become self-reliant as early as possible, more particularly on their financial resources. In order to help them to achieve these, certain concessions have been extended to them by the Gvoernment of India, NABARD and the sponsor banks Inspite of this, the regional rural banks have not been performing satisfactorily and most of them are not financially viable. The Working Group on regional rural banks constituted by the Government of India have made certain recommendations for strengthening the regional rural banks and these recommendations when fully and effectively implemented are likely to bring improvements in their functioning and profitability to a certain extent.

Some relaxations in the credit policy parameters of the Reserve Bank of India like the exemption of the rural deposits from the purview of Statutory Liquidity Ratio requirements would enable the banks to improve their earnings from the rural operations.

In terms of the penetration of the banking industry into rural India, it must be admitted that there is much more to be achieved than what is accomplished so far. A major chunk of the rural community is yet to be reached by the banks. The 'Service Area' concept which is now being implemented through the lead banks is evidently a decisive step in this direction. Its success would depend upon the efficiency in formulating and implementing the village plans by 17,000 rural branch managers. Programmes are already started to train these managers. Besides training, sensitising them to the problems of rural poverty is of crucial importance.

NABARD's role in rural uplift

G.R. Sharma

The author in this piece, examines the role of NABARD, the apex body for refinancing rural credit. He commends the pivotal role played by NABARD in coordinating the activities of cooperative and commercial streams of credit. However, it must be confessed, he says, that achievements in the rural credit front have been marked by regional imbalance and disparities, which need to be given priority attention.

THE PROCESS OF INSTITUTIONALISATION of farm credit was introduced with the enactment of Cooperative Societies Act, 1904. The aim was to give relief to the poor from the clutches of the money lenders as also to provide facile credit for increasing their agricultural production and through that the standard of living. Agricultural credit societies were set up in the villages and the cooperative system as we see today developed subsequently. However, the system could not bring desired results till the advent of independence and the poor farmer remained dependent on money lenders for meeting most of his credit needs. With the independence of the country, the ideal societies pattern of society was accepted for all round progress. With a view to assessing the real situation obtaining in the country with regard to agricultural economy, Reserve Bank of India constituted a "Committee of Direction" in August 1951 to conduct an All India Rural Credit Survey". This Committee was required mainly to look into the various problems faced by the cooperative credit structure and to find out remedial measures to tackle them effectively. The Committee in its report submitted in the year 1954 observed that "Institutional Credit fell short of right, quality was not of right type, did not serve the right purpose and often failed to go to the right people." It came to the conclusion that hardly 3.1% of the total credit requirements of rural borrower were met by the cooperative and 3.3% from the Government sources. Thus the farmers had to depend on other agencies including private money-lenders for meeting their rest of the credit requirements. The Committee recommended the "Integrated Scheme of Rural Credit" which, interalia, included rationalisation, reorganisation and strengthening cooperative credit structure with active State support. The other important recommendation of this Committee was nationalisation of Imperial Bank of India with a view to providing credit support to the cooperative credit structure and extend banking facilities in rural areas. In pursuance of the recommendations of this Committee, the short-term and long-term cooperative credit structure was developed with active State support so as to develop a suitable substitute of private money-lenders. All India Rural Credit Review Committee which was set up in 1961-62 further observed that the share of institutional finance had gone up to 20% and was still quite below the expected level. In view of the slow and tardy progress of the cooperative credit structure and vast growing credit needs of rural credit, specially with the introduction of capital intensive high yielding varieties, the Government accepted multi-agency approach in the year 1969 when 14 large commercial banks after their nationalisation were involved in the sphere of agricultural credit. Subsequently, in the year 1975, Regional Rural Banks (RRBs) appeared on the scene. This was done with a view to developing a multi-dimensional, multiphased credit delivery system in the country to serve rural masses.

Existing set up

The following main institutional sources of funds exist for rural borrowers with NABARD at the apex level:

(i) Cooperatives:
(a) Those meeting short-term and medium-term credit requirements.
(b) Those providing long-term credit.
(ii) Commercial Banks and Regional Rural Banks: To provide all types of agricultural credit.

Cooperatives

The Primary Agricultural Credit Societies (PACS) at grass root level had already covered almost all the villages in the country. As on 30 th June 1986, the total number of Primary Agricultural Credit Societies including farmers' service societies and Large Scale Multi-purpose Societies (LAMPS) stood at 92430. These are assisted at higher level by 352 District Central Cooperative Banks and 29 State Cooperative Banks. The long-term credit structure consists of State Land Development Banks (19) with their branches/affiliated Primary Land Development Banks (PLDBs)

numbering about 1800 all over lthe country. LDBs provide term credit for various agricultural investments undertaken by the farmers. A comprehensive data on the key indicators on cooperative credit as on 30 June 1986 is given under.

Short-term structure:

(Rs. in Crores)

Sr. No.	Particulars	SCBs	CCBs	PACS
1.	Paid up capital	147.20	506.59	831.54
2.	Membership (in Nos.)			
	(i) Societies	17661	2,19102	—
	(ii) Individuals & Other	20438	49,581	7,21,77,000
3.	Deposits	3385.41	4932.00	571.98
4.	Reserves	468.74	501.48	296.08
5	Borrowings	1227.00	2287.73	3927.22
6.	Working Capital	5546 62	8663.41	6547.61
7.	Loans issued	5514.22	7333.09	—
8.	Outstanding	3852.79	5444.34	4323.20

Long-term structure:

Long-term structure

(Rs. in crores)

Sr. No.	Particulars	LDBs
.	Paid up capital	193.01
.	Membership (In Numbers)	
	(i) Societies	3,848
	(ii) Individuals & others	34,68,221
.	Reserves	280 01
.	Outstandings	2624.88

It would be seen from the above that the cooperative credit structure has substantially contributed in providing credit in the rural areas. Yet it suffers from inherent weakness such as poor recovery, lack of proper supervision, manpower, weak organisational structure and weak financial base.

Commercial banks

The commercial banks which had been hesitant in the past to enter into the sphere of agricultural financing are now very much in and are playing a very significant role in providing agricultural credit in the rural area. There were 29920 rural branches in the country as on 31.3.87 which were providing agricultural credit to the farmers. This was in comparison to 1832 branches in 1969. The average population covered per branch also came from 65000 in 1969 to 16000 in 1986. These banks are financing for various purposes like minor irrigation, land development, farm-mechanisation, plantation and horticulture, IRDP and other animal husbandry schemes. The RRBs which have been considered as rural arms of commercial banks came into existence in the year 1975. The RRBs were called upon to open branches in remote rural areas and focus attention to meet the credit requirements of weaker sections. So far 196 RRBs have been established with branch net work of nearly 13,067 in 362 districts (30.6.1987). The total priority sector loans and advances outstanding as on 31 December 1986 amounted to Rs. 23,811 crore of which a sum of Rs. 10138 crore was outstanding under agriculture. Under the Scheme called Lead Bank Scheme the commercial banks are assuming the lead responsibility in districts. assigned to them. The Lead Bank prepares district. credit plan (DCP) for each district covering a period of 3 years. On the basis of DCPs, annual action Plans are prepared. The implementation of Annual Action Plan is coordinated by Government. The commercial banks have been able to achieve the targets set before them.

Apex level body

An important development in the field of rural credit during the Sixth Plan was establishment of a new Institution—National Bank for Agriculture and Rural Development (NABARD)—to pay undivided attention in all the matters concerning policy, planning and operations in the field of rural credit. NABARD was set up in the year 1982 as an independent institution at the national level by retaining close links with RBI. The basic objectives of NABARD are to translate National Development Programme into bankable propositions so that the strain on budgetary resources is reduced and in the process resources are used more effectively for creation of necessary infrastructure. NABARD provides *financial assistance to the Cooperative Banks,* Commercial Banks and RRBs in the form of refinance by providing short-term, medium-term and longterm credit. The bank has also been entrusted with the responsibility of strengthening the credit delivery system of these institutions and to ensure that the staff handling agricultural credit schemes is adequately trained. The National Bank (NABARD) plays a vital role in the reduction of regional imbalances and providing assistance to small and marginal farmers and other weaker sections. It pays special attention to *exploring new and innovative opportunities in agricul*ture and rural development. National Bank also maintains research-cum-action oriented projects in the field of rural development. National Bank also maintains a Research and Development fund for supporting research-cum-action oriented projects in the field of rural development. National Bank pays special attention to monitoring various projects in order to ensure their proper implementation, and to evaluate them so that in the light of findings, the quality of projects and their implementation can be improved. As an apex institution National Bank has also the responsibility of coordinating the activities of cooperative and commercial streams of credit.

During 1986-87 National Bank sanctioned short-term credit for seasonal agricultural operations to State Co-operative Banks to the extent of Rs. 1425.29 crore and Rs. 298.03 crore for financing production and marketing activities and weavers societies. Credit limits sanctioned to RRBs for 1986-87 aggregated to Rs. 269 crore. Disbursement of refinance under schematic lending amounted to Rs. 1334 crore in 1986-87. National Bank has a sound financial base and capacity to generate adequate resources to meet the challenges of rural credit ahead.

Challenges/prospects

A major policy objective in the sphere of agricultural credit during the Seventh Five Year Plan period is to ensure a substantial increase in the flow of credit particularly for weaker sections of the population, for the less developed areas, specially the north-eastern region, for day land farming and for pulses and oil seeds development.

The targets for various financial institutions to be reached by the end of the 7th Five Year Plan i.e. 1989-90 are as under:—

	(Rs. in crores)
1. Cooperatives	
(a) Short-term Loans	5540
(b) Medium-term Loans	500
(c) Long-term Loans	1030
2. Commercial Banks including RRBs	
(a) Medium-term Loans	2500
(b) Term Loans	3000
Total: 1+2 =	12, 570

It could be seen from the above that by the end of the 7th Five Year Plan the credit institutions are expected to provide Rs. 12570 crore in the form of short term and term loans as against the present level of Rs. 5000 crore. This throws enormous responsibility on all financial institutions viz. Commercial banks, cooperative banks & Regional Rural Banks to achieve the goal set before them. This in turn would inter-alia require adequate measures to strengthen the operational efficiency in terms of manpower, financial resources and formalities of lending institutions particularly the cooperative institutions. Primary Agricultural Credit Societies should be converted into multi-purpose cooperatives in a phased manner so as to enable them to handle not only credit but also other services and supplies. Similarly, Central Cooperative Banks, the State Cooperative Banks & Land Development Banks should be strengthened on the lines recommended by the CRAFICARD. It may not be out of place to mention it here that the flow of agricultural credit has so far been confined to certain areas particularly for cultivation of paddy & wheat crops. In the 7th Five Year Plan there is a major emphasis on dry land farming and cultivation of pulses and oil seeds. Steps should be taken to ensure credit support for these programmes.

Although there has been appreciable increase in flow of credit from institutional agencies, no perceptible improvement has been possible in the recovery of loans. The recovery performance of primary agricultural cooperative societies has been showing a declining trend. As on 30 June 1986 there were overdues amounting to Rs. 1806.08 crore forming 40.96% of the demand. A similar position prevailed with Land Development Banks whose lending has remained by and large static over the years. At CCB level the percentage of overdues to demand for the year 1985-86 was around 37.8% This has been a cause of concern to National Banks.

With a view to strengthening the credit delivery system National Bank has launched pilot projects in 20 districts in the country. The objective is to bring improvement in the quality of lending, effective supervision and monitoring of agricultural credit, recycling of funds, diversification of loan portfolios, new ideas of business and strengthening the human resources base of banks at grassroot level.

National Banks also initiated various measures like 10-Point Programme for rehabilitation of Weak Primary Land Development Banks and 15-Point Prgramme for selected PACS and LAMPS. Another department of National Bank namely "Vikas Volunteer Vahini" is engaged in spreading the principles of "Development through Credit" among the rural people. It propagates the repayment ethics among the rural borrowers through volunteers picked up from amongst successful loanees themselves, who have good record of loan utilisation and repayment duly supported by technocrat volunteers. These measures are expedited to improve the recovery position of banks in the near future.

Although the commercial banks have achieved the targets assigned to them, yet much is required to be done at qualitative front. The commercial banks are expected to play a much spectacular role in the sphere of agriculture finance with greater resources at their command, the more efficient management and higher operational efficiency they have. The commercial banks should follow schematic app oach to lending. They must develop the attitude of a developmental banker. It will not be out of place to confess that the achievements in the rural credit front have been marked by regional imbalances and disparities. The flow of credit had not been evenly spread between different strata of rural masses. It has yet to be ensured that the credit reaches the right hand and at right time in right quantity. The financial discipline has to be ensured at both the bankers as well as borrowers level. The bankers have to be ready to face the situation arising out of natural calamities which would require a constant review of their organisational structure, their policies, procedures and practices.

Task ahead

The broad objectives in the next 15 years will remain—elimination of poverty and creating conditions of full employment, satisfaction of basic needs of the people, viz. The problems of food, cloth and shelter. The Indian agriculture will have to be geared up to feed the population of 972 million, which would be needing 235 to 240 million tonnes of foodgrains by the end of this century. There is thus enormous task of financing the agriculture sector. The existing institutions both at the grassroot level and at the apex level will have to prepare themselves by constantly reviewing their policy, procedure, and practices to meet the challenges ahead. ☐☐☐

Can banks alone achieve rural development ?

Dr. A.R. Tripathi

Rural development is a comprehensive programme of activities which include agricultural growth, development of economic and social infrastructure, village planning, public health, education, functional literacy, communications, etc. The Government has taken several steps in this regard. These include community development programme, establishment of Panchayati Raj, Garibi Hatao programme, Integrated Rural Development Programme and reorientation of the banking system towards rural people. These steps, the author feels, have no significance without social unity and awareness about these programmes among the masses. Indeed, rural development needs planning at grassroots level.

RURAL DEVELOPMENT IS A COMPREHENSIVE programme of activities which include agricultural growth, development of economic and social infrastructure, village planning, public health, education, functional literacy and communications, etc. It has two important aspects, viz, economic development with a close interaction between different sections and sectors; and economic growth, specifically directed to the rural people. The main thrust of attention in all the special programmes is towards weaker sections, not only in terms of providing incentives for development but also linking of economic activities into well planned infrastructure. Rural development thus, encompasses both spatial and functional integration of all relevant programmes bearing on increased agricultural production and provision of gainful employment to rural people.

Rural development programmes

During post-Independence period, the Government has taken several steps for rural development, such as community Development Programme (CDP), establishment of Panchayati Raj, Garibi Hatao Programme and Integrated Rural Development Programme, etc. A comprehensive Community Develop-ment Programme (CDP) covering agriculture, rural industries, education, housing, health, recreation, etc., was launched to tackle the problems of rural areas in a concerted and co-ordinated manner. The CDP, thus, formed the rural dimension of India's development planning. This educational and functional programme sought to create an urge among the rural people for better life and to show the way for satisfying this urge predominantly through self help under a democratic set up.

Panchayati Raj, which was introduced in 1959, is a three tier structure of local self government at the village, block and district level. All Panchayati Raj bodies are organically linked up. Special representation on these bodies is given to backward classes, women and co-operative societies, Elected directly by and from among villagers, the panchayats are responsible for agricultural production, rural industries, medical relief, maternity and child welfare, common grazing grounds, village roads, tanks and wells and maintenance of sanitation. In some places, they also look after primary education, maintenance of village records and collection of land revenue. The primary objects of Panchayati Raj is to enable the people of each area to achieve intensive and continuous development in the interest of the entire population.

Several schemes were also introduced on experimental basis by the Central and State Governments under Garibi Hatao Programme. Some of these were: Intensive Agriculture Development Programme (IADP-1966), Small Farmers Development Agencies (SFDA-1969), Marginal Farmers and Agricultural Labourers Agencies (MFAL-1971), Drought Prone Areas Prgramme (DPAP-1970), Hill Area Development Programme (HADP-1972), Command Area Development Programme (CADP-1974), Special Live Stock Production Programme (SLPP-1975), Food for work Prgoramme (FFWP-1977). In April 1978 an Intregated Rural Development Programme (IRDP) was started in 2300 blocks covered by SFDA, DPAP and CADP, with the object of lifting the poorest families in the rural areas-small farmers, marginal farmers, agricultural labourers, rural artisans, etc. above the poverty line on a lasting basis by providing them with productive assets and employment.

The IRDP

On October 2, 1980 the IRDP was extended to all the 5011 blocks of the country and made a major component of the New (Revised) 20-Point Programme. It was further supplimented with programme like Training of Rural Youth for self Employment (TRYSEM-Aug. '79), National Rural Employment Programme (NREP-Oct. '80), Development of Woman and Children in Rural Area (AWCRA-Sept. '82) and Rural Landless Employment Guarantee Programme (RLEGP Aug. 83).

Banks sustained their efforts in providing finance under IRDP, which is a major poverty allveation programme, to provide assistance to families below the poverty line so as to enable them to improve their income level and cross above the poverty line.

Banks' role in IRDP

The Seventh Plan envisages a target of assisting 35 million families. Originally, a target of 3.2 million families was envisaged for 1986-87, i.e. the second year of the Seventh Plan, which was subsequently revised to 3.5 million families. Of this, 2.04 million were to be those already assisted under the programme and 1.46 million new beneficiaries. Against this, upto the end of March, 1987, 3.74 million families had been assisted and term loans amounting to Rs. 997.78 crores disbursed by banks as compared with 3.06 million beneficiaries and term loans of Rs. 730.15 crores during 1985-86. Out of the total beneficiaries upto March 1987, 1.68 million families constituting 45 per cent of the total number of beneficiaries belonged to SC/ST. Steps were also being taken to improve the coverage of women beneficiaries who formed only 15 per cent upto the end of March 1987. During the period, while the subsidy allocated was Rs. 543.83 crores, the subsidy utilised amounted to Rs. 604.37 crores, which shows the conciousness of the rural people towards this programme.

Credit is a basic input for any development programme. This is particularly true for rural development which aims to improve the standards of living of rural people as well as to increase agricultural productivity. The IRDP is financed partly by subsidy and partly by bank loans. Lack of adequate finance constitutes a formidable bottleneck in the rural development of the country. Banks play a crucial role in eliminating this bottleneck by extending financial assistance of various kinds to rural people.

Banks vs rural development

Under the inauguration of planning in 1951 and the consequent emphasis placed on accelerating the pace of rural development, it was realised that the banking system in India fell too short of the requirements of growth of the magnitute envisaged in the plans. Accordingly, steps were initiated soon after the independence to restructure and reorient the banking sector of the country to meet the challenges of growth.

To begin with, the RBI was nationalised in 1948, the Imperial Bank in 1955 and certain banks of the erst while princely states in 1959, the 14 commercial banks in 1969 and 6 commercial banks in 1980. The nationalised banks launched a vigorous programme of branch expansion in a bid to serve the hitherto unbanked areas and to mobilise the rural savings which had so far remained dormant. Again the policies of nationalised banks were reoriented towards assistance to priority sectors, weaker sections of society and the backward areas. A number of schemes introduced by the RBI followed in quick succession covering the various facets of rural development. Some of them are the scheme of vigorous branch expansion, lead bank scheme, priority sector lending and differential rates of interest scheme. The establishment of RRBs was also an important step taken for rural development during post nationalisation period. As a result of all this, the entire picture of Indian banking, vis-a-vis Rural development has had a radical change. In this paper we shall evaluate these developments in conformity with the requirement of the rural people.

Branch expansion

One of the important objectives of nationalisation of 14 major commercial banks in 1969 was to extend banking facilities to unbanked, underbanked and rural areas in order to mobilise the savings of these areas as also to facilitate an increased flow of assistance into them. This was considered essential for a wider diffusion of entrepreneurial ability and to bring about a balanced regional development of the country. Branch expansion was also calculated to help facilitate providing of liberal lending facilities to agriculture, small scale industries, small business concerns, transport operators and others belonging to the weaker sections of the society. Accordingly, the nationalised banks were directed to embark upon a programme of branch expanison specially in those areas which had hitherto remained neglected or deprived of banking facilities.

An analysis of Table (T. 2) reveals that the share of rural branches in total bank branches increased from 22.3 per cent in 1969 to 55.8 per cent in 1986 whereas the share of branches in semi-urban areas declined from 40.2 per cent to 20 per cent during the same period. However, the share of rural and semi-urban branches taken together increased from 62.5 per cent in 1969 to over 75 per cent in 1986 with a corresponding decline in the share of urban and metropolitan branches from about 38 per cent to less than 25 per cent.

The above analysis shows an impressive record of public sector bank in respect of the emphasis placed by them in rural and semi-urban branches during the post-nationalisation period. However, a better idea of the efforts put in by these banks can be had from the number of rural and semi-urban branches that existed in 1969 and 1986. In 1969, the public sector banks had 4159 rural and semi-urban branches while their number (38383) recorded about 10 fold increase in 1986. During the same period, the private sector banks increased their rural and semi-urban offices from 1045

to 2844 only. This clearly shows that one of the principal objectives of bank nationalisation, that is, expansion of banking facilities in the unbanked and underbanked areas was fully met by the nationalised banks.

Lead bank scheme

The Lead Bank Scheme lauched by the RBI in December, 1969 constituted another important step in the field of banking for rural development. This scheme was designed to co-ordinate the programme of branch expansion and priority sector lending by commercial banks under the leadership of a specified bank in each area.

Under this scheme, the State Bank of India, the fourteen nationalised banks and three private sector banks were allotted all the districts of the country except Calcutta, Greater Bombay, Madras and Union Territories of Chandigarh, Delhi, Goa, Daman and Diu, to assume the role of leadership in an effective and systematic manner. The allotment of the districts was based on such criteria as the size of the banks, the adequacy of resources for handling the volume of work, contiguity of the districts, the regional orientation of the bank ,the desirability of each state to have more than one lead bank operating in the territory and the extent possible for each bank to operate in more than one state.

The Lead Bank Scheme specified a bank as the leader to bring about a co-ordination of co-operative banks, commercial banks and other financial institutions in the districts allotted to it in the interests of district development. The lead banks were expected to make a quick survey of their lead districts so as to identify unbanked centres where bank branches could be located and prepare a phased programme of branch expansion in the districts.

The District Credit Plan (DCP) is an important phase of the Lead Bank Scheme. It involves area development scheme. extension of banking facilities to unbanked areas, assistance to priority and weaker sections of the society and the mobilisation of the specific schemes for farm and nonfarm sectors such as poultry, dairy, minor irrigation, weavers, small scale industries and industrial estates. The credit Plan covers a period of three years. However, planning being a continuous process, necessary corrective measures were planned to be introduced as and when necessary in the light of the periodic assessment of the scheme.

Priority sector lending

One of the most significant steps taken in the post-nationalisation period was the identification of agriculture, small scale industries, retail trade, small business, road and water transport operators, self-employed and professionals, exports and education as the priority sectors of the economy which needed the special attention of banks for their financial assistance. The bulk of population of the country was engaged in these sectors and yet, their share in the total bank advances on the eve of nationalisation of banks amounted to be less than 15 per cent. After nationalisation in 1969, the public sector banks, were required to reorient their lending policy in favour of these sectors and to give them loans at concessional rates of interest.

An analysis of Table (T.3) reveals that the number of priority sector's borrowal accounts of these banks increased from 2.6 lakh in 1969 to 240.4 lakh in 1985. During the same period, the amount outsanding against these accounts registered an increase from Rs. 441 crore to Rs. 20544 crore, thus pushing up the percentage of priority sector advances to the total bank advances from 14.6 per cent to 42.7 per cent. This increase was highly impresssive by any standards.

Among the different priority sectors, agriculture quite naturally claimed 43.7 per cent of the total bank assistance to priority sectors as at the end of 1985, closely followed by small scale industries (36.03 per cent). All other sectors taken together claimed only 20.3 per cent of the total assistance.

Differential rates of interest

With a view to helping the weaker sections of the society, a scheme of differential rates of interest (DRI) has been in operation since 1972. Under the scheme, public sector banks make funds available to certain categories of borrowers in industrially backward districts at a concessional rate of 4 per cent for their endeavours. The progress of this scheme is presented in T. 4.

Table-4

Public Sector Bank's Lending Under Differential Rates of Interest Scheme (DRI).

(Amount in Crores of Rs.)

Year (as at the end of December)	*No of Borrowal Accounts (000)*	*Amount Outstanding (Rs)*	*Percentage of DRI Advances to Total Advances*
1972	26	0 87	0 02
1975	465	20 99	0 31
1978	1620	90.00	0.74
1981	2925	257 50	1 17
1984	4273	441 38	1 22
1986	4797	560 83	1 17

As is evident from the table, the number of borrowal accounts under the DRI Scheme increased rapidly from 26000 in 1972 to 16.2 lakh in 1978 and 29.25 lakh in 1981, 42.72 lakh in 1984 and 47.97 lakh in 1986. The amount outstanding against these accounts also rose from Rs. 87 lakh in 1972 to Rs. 90.00 crore in 1978 and Rs. 257.50 crores in 1981, Rs. 441.38 crore in 1984 and Rs. 560.83 crore in 1986. Despite this increase, however, the share of the DRI advances to total advances was about 1.0 per cent only in 1986. This is quite understandable because despite their socially-oriented policies, commercial banks in the country retain their basic character as economic institutions and therefore, they can be expected to extend assistance at a heavily subsidised rate only to a limited extent.

Regional rural banks (RRBs)

Another significant development in the field of

banking in post-nationalisation period was establishment of nine Regional Rural Banks (RRBs) under the Regional Rural Bank Act, 1976. This step was taken in pursuance of the recommendation of the working group constituted by the Government of India on July 1, 1975 to study in depth the problem of devising alternative agencies to provide institutional credit to rural people in the context of the 20-point Economic Programme.

The main objective of setting up of the RRBs was to provide credit and other facilities especially to small and marginal farmers, agricultural labourers, artisans and small entrepreneurs in rural areas. Each RRB would operate within the local limit to be specified by a notification. If necessary RRBs could establish branches or agencies at any place notified by the Government.

Each RRB was sponsored by a public sector bank which provided assistance in several ways, viz, subscription to its share capital, provision of such managerial and financial assistance as might be agreed upon and in the recruitment and training of personnel during initial period of its functioning.

Every RRB is authorised to earn on and transact the business of banking as defined in section 5 (b) of the Banking Regulations Act, 1949 and may also engage in other business specified in Section 6 (1) of the said Act. In practice, an RRB is required to undertake (a) granting loans and advances to small scale and marginal farmers and agricultural labourers whether individually or in groups of co-operative societies or farmers' and agricultural labourers whether individually or in groups of co-operative societies or farmers' services societies for agricultural purposes or agricultural operations or for other related purposes, and (b) granting loans and advances to artisans, small entrepreneurs and persons of small means engaged in trade, commerce, industry or other productive activities within its area of operation.

A purpose-wise break up of the RRBs advances as at the end of December, 1986 is shown in T.5

Table 5

Purpose-wise Break-up of RRBs Advances as at the end of December, 1986

(Amount in Crores of Rs.)

	Purpose	*Amount (Rs.)*	*Percentage*
1.	Short Term (Crop loan)	332	19.2
2.	Term Loans for Agriculture	376	21.5
3.	Advances to Activities Allied to Agriculture	297	17.0
4.	Rural Artisan, villages & cottage industries	108	6.2
5.	Retail Trade and Self-employed etc	476	27.2
6.	Consumption Loans/other purposes	159	8 9
	Total	1748	100.0

Source: RBI's Report on Currency and Finance, 1986-87.

It is clear that about 60 per cent of the RRBs advances were claimed by agriculture and allied activities. Of this, about 22 per cent was in the form of term loans to agriculture and the balance was shared almost equally by short term crop loans and activities allied to agriculture. Retail trade, self-employed persons, etc. together claimed 27.2 per cent of the total RRBs advances, while rural artisans, village and cottage industries, etc. on the one hand, and consumption loan, etc., one the other, accounted for between 6 and 9 per cent of the total advances.

Problems faced by banks

While implementing the rural development oriented schemes, banks usually face many problems, such as, lack of infrastructural facilities, lack of proper training and recruitment, improper identification of beneficiaries and utilisation of funds, lack of co-ordination between DRDA, Bankers, Block level staff and also recovery of loans, etc. Therefore, it is an urgent need to remove these hindrances so that desired results can be achived.

Table-1

Progress in Assistance Provided by Banks Under IRDP

	VI Five Year Plan	*VII Five Year Plan*	
Particulars	*(1980-85)*	*1985-86*	*1986-87*
Subsidy allocated (Rs. crores)	1771.86	407.36	548.83
Subsidy utilised (Rs. crores)	1650 27	441.10	604.37
Term Loans disbursed (Rs. crores)	3101.61	730.15	997.98
No of SC/ST families assisted (lakh)	63.38	13.83	16.82
Total No. of families assisted (lakh)	165.62	30.61	37.41
Target—No. of families to be assisted (lakh)	151.30	24.71	35.0

Source: RBI's Report on Currency and Finance, 1986-87.

Mass participation, a must

It may be mentioned here that Government efforts alone will not be able to eradicate poverty and ensure speedy uplift of the downtrodden. Communities may do slightly better. But without social unity and participation by the poor themselves, it is almost impossible to achieve the desired targets of reducing percentage of the people below poverty line. Indeed, rural development needs planning at gross-root level. It requires an arrangement by which balanced development of all rural settlements can be made. □□□

Table-2

Branch Expansion By Public Sector Banks

Banks	Period	Rural	Semi-Urban	Urban	Metro-politan	Total
1 State Banks of India	June, 1969	462 (29 4)	796 (50.7)	163 (10.4)	150 (9.5)	1571 (100)
	March, 1986	3584 (48.2)	2053 (27.6)	1116 (15 1)	676 (9.7)	7429 (100)
2.. SBI's Subsidiaries	June, 1969	358 (40.0)	373 (42 0)	86 (9.6)	75 (8.4)	892 (100)
	March, 1986	1306 (38.8)	1119 (33.3)	580 (17.2)	358 (10.7)	3363 (100)
3 Fourteen Nationalised Banks'	June, 1969	703 (16.9)	1465 (35 1)	928 (22.3)	1072 (25.7)	4168 (100)
	March, 1986	10157 (47.0)	4436 (20.5)	3966 (18.3)	3064 (14.2)	21623 (100)
4 Six Nationalised Banks	June, 1969	—	—	—	—	—
	March, 1986	1461 (41 7)	734 (20 7)	815 (22 9)	523 (14.7)	3553 (100)
5 Regional Rural Banks	June, 1969	—	—	—	—	—
	March, 1986	11671 (92.3)	853 (6 7)	121 (1.0)	1 (—)	12646 (100)
6. Other Scheduled Commercial Banks	June, 1969	337 (20 0)	708 (41.9)	279 (16 5)	364 (21.6)	1688 (100)
	March, 1986	1434 (32 1)	1399 (31.3)	991 (22.2)	647 (14.4)	4471 (100)
Total	June, 1969	1860 (22.3)	3344 (40.2)	1456 (17.5)	1661 (20.0)	8321 (100)
	March, 1986	29631 (55.8)	10594 (20.0)	7589 (14.3)	5769 (9.9)	53085 (100)

Source RBI's Report on Currency and Finance, 1986-87

Table-3

Public Sector Banks' Advances to Priority Sectors.

(Number in Lakh; Amount in Rs. Crores)

Sectors	Number of Accounts		Amount	
	June, 1969	*June, 1985*	*June, 1969*	*June, 1985*
1. Agriculture	1.65	159 3	162 (36.8)	8738 (43.7)
2 Small Scale Industries	0 51	15.7	251 (56.9)	7375 (36.0)
3. Other Priority Sectors	0.44	65 4	28 (6 3)	4431 (20.3)
Total	2.60	240.4	441 (100)	20544 (100)
Percentage of Public Sector Banks' Advances to Priority Sectors to Gross Bank Credit			(14.6)	(42.7)

Source RBI's Report on Currency and Finance, 1986-87.

Are rural savings really low ?

Dr. B.N. Ghosh

In this analytical piece, the author contradicts the prevalent common notion that rural savings rate in India is low. Rather rural savings have been growing in volume over the years and the rate of growth of rural M.P.S. is much higher than that of urban M.P.S. He wants the policy-makers to shed the anachronistic notion of favouring more and more allocation of resources to the urban sector for the generation of more savings and surplus.

AS IS WELL-KNOWN, THERE ARE MANY criteria for the allocation of scarce resources. One such investment criterion is based on the notion that more and more resources should be invested in that sector which can generate a relatively large amount of surplus in the form of saving. An idea is often propagated that industrial investment is a better way of generating more saving for future use as compared to rural (agricultural) investment. This type of argument forms the basis of urban-based strategy of economic development (M. Lipton, **Why Poor People Stay Poor,** 1978, P. 239). However, it is plausible that saving out of profit is often higher than saving out of wage; but it does not necessarily lead to the presumption that rural saving is lower than urban saving, as claimed by many studies on savings in India. The present paper attempts to show that in a developing country like India, rural saving is always underestimated and that contrary to general belief, rural saving is not very low in India. In fact, rural saving in India is not so low as is sometimes given to understand by means of some innocuous figures and data.

Saving and investment

Theoreticians often argue that future output (income) can be generated only when sufficient saving is made out of the present income. On the face of it, the argument seems to be preposterous because it is not saving which genrerates income but it is the other way round. It is investment which generates income via multiplier, and therefore also the future saving. It is not right to believe that saving always determines investment. Saving and investment are independently taken up by different categories of people. Mere increase in saving cannot do anything favourable if it is hoarded or, not productively utilised. It is investment and not saving, that determines growth. The idea that low saving is bad, arises implicitly from the connection that is believed to exist between saving and investment. Infact, more correctly, investment determines saving and not the vice versa. Investment has its effect on prices, which in turn influence income distribution and shares of profit and wage; and given the marginal propensity to save, the magnitude of saving is determined. Low saving is sometimes beneficial. Low saving means higher consumption which means, other things being the same, higher profit, higher reinvestible surplus and higher investment. Thus, low saving need not hinder investment. The main bottleneck in underdeveloped countries is not low saving, but lack of utilization of resources and of organisational ability. However, the bottlenecks can be reduced to a very great extent by increasing the tempo of investment, a large part of which can be financed by foreign capital. Keynes's analysis in which saving plays a passive role is still valid in backward countries. Be that as it may, the general notion that is prevalent in least developed countries (LDCs) is that since investment can generate more profit, and hence more saving in the urban sector, more and more investment should be allocated to the urban sector.

Underestimation

Our data on rural saving have an inherent bias towards underestimation. They do not account for many non-monetized farm activities. The works done by the farmers in their leisure time or beyond the normal working hours, such as desilting, cleaning and gleaning the crops, bounding and many other types of supervisory work do constitute a lot of saving when translated into monetary terms. But, unfortunately, our national accounts statistics cannot capture such invisible and subtle farming operations. Our national saving data obviously underestimate our rural savings. Michael Lipton has rightly pointed out that careful estimates of savings reveal that rural saving propensities are much higher than those calculated from national income

figures (Lipton: Op. cit., p. 247). This becomes evident in careful micro studies which take into account various types of non-monetized savings of the individual farms. In fact, macro studies on rural savings have an underestimation bias in India.

A survey of rural savings in India in the 1950s suggests that rural saving rates were around 12 percent (P.G.K. Panikar, "An Essay on Rural Saving in India" in T. Shukla (Ed.), **Economics of Under developed Agriculture, 1969**). The small piece of evidence can refute the claim of many theory-bred economists who observe that farm investment generates income out of which nothing is saved. As NCAER's study reveals, in 1961-62, Indian rural households with income between Rs. 4,800 and Rs. 7,200 per year could save as much as 19 percent; but the urban households having higher income in the range of Rs. 6,000 and Rs. 10,000, could manage to save only 11.4 per cent of the income (NCAER: Urban Income and Saving, 1963; and All-India Rural Households Survey, 1965). M. Lipton has observed that ordinary rural households in India do support a larger number of family members even with lower level of income than the comparable urban households.

Very often the available data will show that rural savings in India are much lower than urban savings. The data do conceal the existing terms of trade between rural (agricultural) and urban (industrial) sectors, Unfavourable terms of trade against agriculture can be regarded as a very potent factor lowering the rural savings in India. As Lipton observes, some amount of rural saving is drained off by deliberate sectoral price distortions to finance socially low-yielding urban investment (Lipton: Op. cit, p. 247). Such investments can be justified neither in terms of equity nor in terms of efficiency (see, B.N. Ghosh, "Political-Economy of Rural Poverty: Some Obiter Dicta" (forthcoming). Needless to say, in the absence of price distortions and disincentives, rural sector could have saved a higher amount. Unfavourable terms of trade reduce the returns on rural investment and make the rural people relatively poor: they will have less incentive to save and invest.

Total savings up

In India, rural household saving as a percentage of national income was 1.6 in the First and Second Plans, then subsequently, it declined slightly from 1.6 per cent to 1.5 per cent between 1961-62 to 1962-63. However, during the period, the urban household savings were 2.6 per cent, 4.7 per cent and 4.9 per cent respectively. The volume and pattern of savings in the rural and urban sectors of India can be gauged from the following table (Table 1). The data in the table could not be updated because the RBI discontinued the study after 1962-63.

As the table 1 shows, absolute performance of the rural sector in the matter of generation of saving has, apparently, deteriorated. But what is more relevant is the absolute total saving which has increased in the rural sector over the years.

Table 1

Savings in India (1947-48) Prices)

Sector	*1950-51*	*1960-61*	*1962-63*
Rural Households			
Total Savings (Rs. in Crores)	147.6	187.3	197.2
P.C. of Total Savings	29.3	18.6	15.2
P.C. of National Income	1.6	1.6	1.5
P.C. of Household Savings	38.7	24.7	23.1
Urban Households			
Total Savings (Rs. in Crores)	231.1	612.9	656.7
P.C. of Total savings	46.6	50.6	50.4
P.C. of National Income	2.6	4.7	4.9
P.C. of Household Savings	61.3	75.3	76.9

(*Source* R.B.I Bulletins)

An estimate by NCAER shows that the net household urban saving was Rs. 7081 million in 1967-68; it was nearly Rs 13,000 million for the rural household during the same period.

Reasons

One explanation which seems to be plausible for the so-called low rural saving in India is the fact that rural income per capita is much lower than the urban income per capita. The ratio between the rural income per capita and the urban income per capita is approximately 1:3. Once this factor is taken into account, rural saving relative to urban saving does not seem to be low. Looked at from that angle, rural-urban saving differentials as presented in the foregoing Table (Table 1) appears to be quite plausible. Not only is the rural income lower than the urban income; but the gap between the rural and the urban incomes is widening in recent years (See, H.S. Shergill's article in **Mainstream**, 5 March, 1988). Furthermore, most of the income earned by rural households is received in terms of goods and services, rather than in cash. Thus, in many cases, savings in terms of good show a high figure and, savings in terms of cash reveal a negligible performance.

As already mentioned, National Sample Survey and Rural Credit Survey have estimated that rural saving in India is as high as twelve percent, excluding direct investment. If we allow for non-cash saving and also take into account depreciation, maintenance and repair, the net cash saving income ratio works out to be 8 percent (P.G.K. Panikar, *Rural Saving in India, 1967*) This is well comparable with our urban savings. Owing to the absence of complete monetization of our rural sector, rural saving very often appears to be low. Moreover, underdeveloped banking habit of the rural people and the inadequacy of financial and saving-mobilising institutions in our rural sector are partly responsible for the apparent low book value of our rural saving.

Rural MPS rising

In spite of all odds, rural savings have been increasing in India. Let us provide a few examples. For instance, in 1960, our rural households contributed 55.9% of our aggregate household savings, and in 1967-68, this contribution went up to 64.1% Rural sector, in the wake of Green Revolution, has been able to increase considerably its income and saving. It is almost a common knowledge that at lower income, other things remaining the same, marginal propensity to save (MPS) becomes lower, and at higher income MPS become higher.

As and when income increased in the rural sector, rural saving has also increased in sympathy. The NCAER Survey in 1967-68 has estimated the MPS of the rural household sector to be 0.32 as against 0.41 for the urban household sector (See, M.T. Paul, "Savings Behaviour in India," *Margin*, July 1986). These figures went up in 1975-76 to 0.34 for the rural sector but came slightly down to 0.40 for the urban sector (See, M.T. Paul, op. cit.). These estimates of MPS are pretty high: unbelievably large for the rural sector. However, there is no gainsaying the fact that over the years, particularly in the post-Green Revolution Period, rural MPS has risen substantially. Table 2 shows rural-urban MPS, as estimated by different studies in India.

Table 2
Estimates of Marginal Propensity to Consume (1950-51 to 1975-76)

Sector	*Diwan's Study (1)*	*Chopra's Study (2)*	*NCAER'S (1966)*	*Studies(3) (1967-68)*	*(1975-76)*
Urban	0 11	0.22	0.24	0.41	0.40
Rural	0.01	0.03	0 14	0.32	0.34

Sources Compiled from (1) *EPW* (1967)
(2) *Margin* (1972)
(3) NCAER Publications & M.T. Paul, *Margin (July 1986)*

The foregoing table very clearly shows that though both rural and urban MPS have considerably increased overtime, the rate of growth of rural MPS has been much higher than that of urban MPS. This fact goes against the established notion that rural people cannot save or that rural saving is palpably low in India.

An interesting fact brought out in this context by the study of NCAER *(Household Income, Saving and Consumer Expenditure, 1972)* needs to be mentioned. It was disclosed by NCAER study of 1967-68 that rural and urban households with the disposable annual income of less than Rs. 3,000 could not make any saving: They rather dissaved. The percentage of urban people in this category was 63 and the percentage of rural people was 74 for the same category. This implies that rural savers constituted only 26 per cent of the rural people and urban savers constituted 37 percent of the urban population. This being the factual position, one can immediately appreciate the performance of the rural sector vis-a-vis the urban sector, when one finds from the NCAER data that whereas 26% of the rural population makes a net saving of Rs. 12, 986 million, 37% of the urban population makes a net saving of or Rs. 7081 million. This appreciative performance of t rural sector was made possible in spite of its higher ra of population growth and higher rate of poverty (both absolute and in relative terms) as compared to those the urban sector. This per se is not a mean achieveme

Capital-output rati

As a matter of fact, we cannot really appreciate t saving behaviour unless we bring into our analy umbrella the real cost of income generation. Income generated by investment. The investment required f the generation of income (output) in a sector is given incremental capital-output ratio. As is shown by t figures of our Five Year Plans, and as we have discuss elsewhere (B.N. Ghosh, Op.cit), capital-output ratio our urban sector (8:1) is on an average, at least fo times the capital-output ratio of the rural sector (2:1 This implies that to be effectively equal, urban savi rate must be four times the rural saving rate. This is n so in India. On the basis of this criterion, it must presumed that under the given circumstances, ru saving rate is not at all low or less satisfactory. Sin capital-output (or, investment income) ratio is very lo in the rural sector, rural saving rate in India can regarded as relatively much higher as compared to th of the urban sector. In fact, no study in India h conclusively established that urban saving rate is fo times higher than the rural saving rate in India,

Conclusio

From what has been adumbrated earlier, a number conclusions follow. Firstly, apparently, to an untrain mind, it will appear that rural saving rate in India much lower than the urban saving rate. If one go beyond the shallow waters of empiricism, it will not difficult for one to appreciate that rural saving substantial and not at all shy. Secondly, many studies India have really underestimated rural savings. Some these studies do not consider many non- monetiz farm activities. These activities condtribute a hu amount of disguised saving which escapes the eyes city-bred theoretical economists. The truth is broug to surface by many micro studies. Thirdly, unfavoura agrarian terms of trade considerably reduce ru saving in India. Fourthly lower per capita income in t rural sector is mainly responsible for lower ru savings. However, once we consider the low capit output ratio in the rural sector, we can at on appreciate the better performance of the rural sector the matter of saving generation. On this count alone, t effective rate of rural saving can be regarded as mu higher than that of urban saving. Unit cost of saving much lower in rural India. Lastly, rural saving has be increasing in India over the years and the rate of grow of rural MPS is much higher than that of urban MP

Rural saving in India has been found to be positive correlated with rural income. As a matter of fact, p capita rural income has started declining since 1969-7 If rural saving is to be enhanced further, rural pover

(Contd on page 3

Turning RRBs into effective institutions

Asha

There has been five-fold increase in the number of regional rural banks in the recent years but, according to the author, most of them have been running into losses. To put them back on rails, she feels, there is an urgent need of making sincere and concerted efforts to effectively implement the recommendations of the Dhar Committee appointed in 1984.

INDIA'S DEVELOPMENTAL APPROACH is haracterised by multiplicity of rural credit institutions ight from top to bottom. At the top is the RBI and its gricultural Credit Department now merged with the gricultural Refinance and Development Corporation o form the NABARD. Along with these is the Agricul- ural Finance Corporation of the commercial banks. At he State level are the State Cooperative Banks, State and Development Banks and at the district level the istrict Central Cooperative Banks. At the grass roots vel (tehsil, block or village level) are Primary Agricul- ural Credit Societies (PACS), Primary Land Develop- ent Banks (PLDB), Farmers Service Societies (FSS), arge Adivasi Multi-purpose Societies (LAMPS) and e branches of the commercial banks (CBs) as well as e Regional Rural Banks RRBs). The oldest of the gencies is the Government which according to the all dia Rural Credit Survey Committee, has been ssigned the role of providing distress finance. The ame committee observed "Cooperation has failed in dia but it must succeed". Thus, the failure of the overnment and Cooperative Agency to provide dequate, timely and efficient credit for rural develop- ent led to the entry of commercial banks on the rural edit scene. Thus, 14 major CBs in 1969 and 6 more in 980 were nationalised and were directed to finance the itherto neglected remote, rural, hilly and tribal areas ith a major thrust to finance the weaker sections. Their mited success and the adoption of the multi-agency proach to rural credit led to the launching of the RBs in 1975. The role mainly assigned to the cooper- ives, the CBs and the CBs sponsored RRBs in the ovision of Rural Credit during the V, VI and VII Plans n be made clear from Table 1.

The RRBs with smaller area of operation and mostly cal staff, employing simple procedure of loaning and eant exclusively for the weaker sections, were given certain incentives and concessions to effectively and adequately finance the 'poorest among the poor'—the small and the marginal farmers, landless labourers, small artisans and craftsmen and the self employed persons. They were also to provide consumption loans and give financial support to most of the anti-poverty programmes, such as, IRDP, TPEP, REP, RLEGP, etc. With the launching of first five RRBs in October 1975, their number by 1986 increased to 194 covering 341 districts with about 13000 branches. They mobilized deposits of Rs. 1286 crore and advanceed loans of Rs. 1408 crore indicating a credit deposit ratio of 109 per cent These banks covered about 20 million families. Their state-wise progress during the decade 1976-1986 is detailed out in Table 2.

Problems

The problem of viability of RRBs has been a major headache for the bankers. The Dantwala Committee (1978) suggested that a RRB, to be viable, would require six years time and network of 70 branches, with an outstanding credit business of Rs. 8 crore and a margin of about 5 per cent between its average borrowing and lending rates. Majority of RRBs have yet to achieve these norms of viability. Profitability of RRBs is also in jeopardy. In fact only a small minority of them earn profit and in some substantial cases accumulated losses have wiped out their entire share capital. The tragic part has been almost fivefold increase in the number of loss incurring RRBs.

The recovery performance of RRBs, has been quite distressing with mounting overdues limiting the recycling of funds. Even the VII Plan document lamented over the worst overdue position of the RRBs (49.6% in 1982-83) among the major grassroots level rural financing agencies such as PACs and PLDBs (40-42%) and the commercial banks (47%). Wilful defaults are mounting and 'by writing off agricultural loans and providing subsidies out of the state exchequer some of the states have set a bad example to the entire country and the rural credit institutions are getting reduced to institutions providing grants rather than recycling scarce resources contributing to their increased inability to provide more credit to meet the ever increasing needs of the rural clientele.

In their preoccupation with the rural branch expansion programme RRBs no doubt have been ahead of other institutions but here too they have to face a stiff competition from PACs, PLDBs and rural branches of CBs. Further, the phenomenal rural branch expansion

has taken a toll of their profitability and recovery performance because of increased estabilishment cost unaccompanied by simultaneous growth in their business and because of lack of adequate and efficient supervision of loans. The situation is aggravated by their low income yielding investment, limitations of deposit mobilization (since they serve exclusively the weaker sections) and because of qualitatively as well as quantitatively inadequate support of staff provided by the sponsor banks. The unequal distribution of staff and workload has also led to poor productivity of per employee which was almost 25 per cent that of commercial banks in 1982. Inadequate training and lower salary structure than the sponsor bank salary structure has further aggravated this problem.

The multi-agency control and monitoring of RRBs generate a situation where 'too many cooks spoil the broth'. The RBI, NABARD, Government of India, State Governments, the sponsor banks, the various developmental agencies of the Government, the Panchayati Raj institutions and the cooperative agencies at one or the other level affect the control and the monitoring operations over RRBs.

Besides the above problems and the pre-occupation of RRBs with fulfilling physical targets of credit for the weaker sections have led them to neglect the vital operations of proper benefit cost analysis of the rural projects, systematic pre-sanction appraisal and post-sanction supervision, proper identification of borrowers and taking up stringent measures against wilful defaulters. Political interference in the appointment of Chairman and staff and disbursal and recovery of loans has been on the increase, recently, affecting the efficiency of RRBs operations.

Table 1
Targets of Agricultural Credit for V, VI and VII Plans

(Rs. in crores)

Sl. No	Agency	V-Plan 1979-80	VI-Plan 1984-85	VIII-Plan 1989-90
I.	Cooperatives			
i.	Short Term Loans	1300 (50.98)	2500 (43.03)	5540 (44.08)
ii	Medium Term Loans	125 (4.90)	250 (4.30)	500 (3.98)
iii.	Long Term Loans	275 (10.79)	500 (8.61)	1030 (8.19)
	Total (I)	1700 (66.67)	3250 (55.94)	7070 (56.25)
II	Commercial Banks (including Regional Rural Banks)			
i.	Short Term Loans	450 (17.65)	1110 (19.10)	2500 (19.89)
ii	Term (MT & LT) Loans	400 (15.68)	1450 (24.96)	3000 (23.86)
	Total (II)	850 (33.33)	2560 (44.06)	5500 (43.75)
	Total (I+II)	2550 (100)	5810 (100)	12570 (100)

Note: Figures in brackets indicate percentage to total
2. Source: VII Plan, pp 17-18.

Table 2
Statewise Offices of Regional Rural Banks (RRBs)

	As on June 30, 1976			As on April 30, 1985			As on April 30, 1986	
	No. of RRBs	No. of Branches	No. of Districts	No. of RRBs	No. of Branches*	No. of Districts	No of RRBs	No of District
1. Andhra Pradesh	1	4	2	14	985	19	15	20
2. Arunachal Pradesh	—	—	—	1	12	4	1	4
3. Assam	—	—	—	5	320	10	5	12
4. Bihar	2	9	4	22	1773	37	22	37
5. Gujrat	—	—	—	9	288	15	9	15
6. Haryana	2	20	2	4	214	9	4	9
7. Himachal Pradesh	—	—	—	1	90	3	2	4
8 Jammu & Kashmir	1	2	1	3	259	10	3	10
9 Karnataka	1	7	2	13	966	19	13	19
10 Kerala	—	—	—	2	262	5	2	5
11 Madhya Pradesh	1	6	2	22	1400	40	24	44
12. Maharashtra	—	—	—	8	445	15	10	17
13. Manipur	—	—	—	1	22	8	1	8
14. Meghalaya	—	—	—	1	39	3	1	3
15 Mizoram	—	—	—	1	33	3	1	3
16. Nagaland	—	—	—	1	8	7	1	7
17 Orissa	2	3	2	9	764	13	9	13
18 Punjab	—	—	—	3	107	6	5	10
19. Rajasthan	1	11	2	14	954	27	14	27
20. Tamil Nadu	—	—	—	1	150	2	2	5
21. Tripura	—	—	—	1	77	3	1	3
22. Uttar Pradesh	6	29	8	38	2745	49	39	51
23 West Bangal	2	21	6	9	693	15	9	15
Total	19	112**	31	183	12606	322	193	341

Note: * As on December 31, 1985
** Of these, 79 branches were opened in unbanked centres.

Prospects in VIII Plan

The RRB is the foundation of the edifice of the rural development credit structure for the millions of the weaker sections to whom its benefits are percolated in a trunketed and diluted form. This is because of the large scale corruption and nepotism with the connivance of the politicians & bankers and the local staff. Concerted efforts should, therefore, be made to consolidate and strengthen the RRBs for onward march. The recent amendments (1987) in the RRB Act are a welcome step in this direction. The Dhar Committee (1984) recommendations need to be effectively implemented. The recommendation of the AFC allowing RRBs to open urban branches needs a closer scrutiny and investigation at the micro-level. The interest rate structure of RRBs vis-a-vis commercial banks needs further consideration both for interests on deposits as well as on advances. Well coordinated efforts to expand this novel institutions in the VIII Plan need to be made particularly in the context of its service to the weaker sections which form about half of India's teeming millions, since the hope of rural India is pinned on RRBs.

Making Regional Rural Banks viable

K. Elumalai

In this piece, the author tries to analyse the reasons for the huge losses incurred by the Regional Rural Banks during the decade 1976-86 despite a phenomenal growth in their branch expansion and deposit mobilisation. Basing his study on the sample survey of the data published by the NABARD, the author makes some concrete suggestions to overcome the grim situation and to make these banks economically a viable medium in the process of rural development.

THE NARASIMHAM COMMITTEE GAVE BIRTH to Regional Rural Banks in 1975 mainly to bridge the gap left unfulfilled due to the failure of co-operative banks on the one hand and commercial banks on the other in disseminating adequate credit to rural sector in general and small entrepreneures in particular as made clear in the long title of the RRB Act, 1976.

An overall analysis of all RRBs as on Dec. '86 over the decade (1976 to 1986) showed contrasting features. On the one hand RRBs registered tremendous growth under branch expansion (26 times), deposit mobilisation (222 times) and credit dispensation (254 times), on the other hand they also accounted for huge loss (149 out of 194 RRBs runs into losses) and accumulated loss (152 out of 194) which is evident from the following table:

With a view to finding out reasons and solutions thereof for the abovesaid dichotomy, a sample study was carried out from the data published by NABARD. While selecting sample RRBs, keeping in mind one of the findings of 'A Study on Viability of RRBs' conducted by AFC at the request of NABARD, i.e., a period of six years is required for an RRB to become viable, RRBs less than six years of age (i.e., RRBs opened from January, 1981 to Dec., 1986) have been excluded from the purview of this study. While selecting individual RRBs, due weightage has been given to the age of RRBs, regional representation, branch network, volume of business, etc. In all, 12 out of 25 and 15 out of 60 RRBs made profit and loss respectively were selected for indepth study.

Profit-making RRBs

The major indicators of this group are given in Table-II (at the end) and important observations emerged are as follows:

1. The average per RRB sample profit-making (hereinafter referred as 'per RRB') branches stood at 124.
2. The per RRB deposit and advances was of the order of Rs. 2530.4 and Rs. 2650.7 lac respectively.
3. The per branch deposit and advances reached the level of Rs. 20.4 and Rs. 21.4 lac respectively
4. The per employee productivity stood at Rs. 8.74 lacs.
5. The per RRB income, expenditure and profit stood at Rs. 426 76, Rs. 406.35 and Rs. 20.41 lac respectively.
6. The per branch income, expenditure and profit stood at Rs. 3.44, 3.28 and 0.16 lac respectively.
7. The per employee income and expenditure amounted to Rs. 0.72 and 0.69 lacs.
8. The constitution of borrowings were: from sponsored bank 24% NABARD 68% and other banks 8%
9. The borrowings from sponsor bank and NABARD constituted 13.21% and 37.15% of total advances
10. The total borrowings to total advances accounted for 54.8%.
11. The total balances to total deposit constituted 53.94%.
12. The balances with sponsor bank to total deposit

Table-I

Year (As on Dec.)	No. of RRBs	No of Branches	Deposits (Rs in lacs)	Advances (Rs in lacs)	RRBs Made (in nos.) Profit	Loss	acc. loss
1976	40	489	772	702	17	23	26
1980	85	3279	19983	24338	25	60	63
1986	194	12838	171494	178484	45	149	152

were 51.43%.

13. The balances with sponsor bank alone account for 96%.
14. The balances kept in money at a call and short notice accounted for 52.79% of total balances maintained.

Loss making RRBs

The major indicators of this group are given in Table-III (at the end) and important observations emerged are spelt out here.

1. The average per RRB sample loss making (hereinafter referred as per RRB) branches stood at 99.
2. The per RRB deposit and advances was of the order of Rs. 1409 and Rs. 1417 lac respectively.
3. Ther per branch deposit and advances reached the level of Rs. 14.26 lac and Rs. 14.33 lacs respectively.
4. The per employee productivity stood at Rs. 8.48 lac.
5. The per RRB income, expenditure, and loss stood at Rs. 184.4 lac, Rs. 218.1 lac and Rs. 33.7 lac respectively.
6. The per branch income, expenditure and loss stood at Rs. 1.86 lac, Rs. 2.21 lac and 0.35 lac respectively.
7. The per employee income and expenditure amounted to Rs. 0.55 and Rs. 0.65 lac.
8. The constitution of borrowings were, from sponsor bank 27.36% NABARD 70.02% and other banks 2.61%.
9. The borrowings from sponsor bank and NABARD constituted 13.96% and 35.5% of total advances.
10. The total balances to total deposits accounted for 42.5%.
12. The balances with sponsor bank to total deposit were only 33.65%.
13. The balances with sponsor bank alone accounted for 79.19%.
14. The balances kept in money at call and short notice accounted for 61.41% of total balances maintained.

Table-IV

Indicators	*Profit making RRBs (Rs in lacs)*	*Loss Making RRBs (Rs in lacs)*
I. Per RRB		
Volume of business	5181 1	2828.6
(a) Deposits	2530 4	1409.5
(b) Advances	2650.7	1417.1
2. Borrowings	1455.0	716.5
3 Balances	1364.8	599.4
II. Per Branch		
1. Volume of business	41.84	28.59
(a) Deposits	20.43	14.26
(b) Advances	21 41	14.33
2. Borrowings	11.75	7.24
3. Balances	11.01	6.07

Making profit

The second reason for making profit was the judicious deployment of internal resources and borrowings. This can be seen between the gap between the two ratios calculated on total deposits and advances respectively. Deployment of funds refers to maintenance of balance (i.e., deposits) with sponsor bank and other banks in the form of money at call, short notice and other types. Borrowings refer to availment of refinance from NABARD, borrowings from sponsor bank and other banks. The judiciousness depends upon the C.D. Ratio. At a particular level of C.D. Ratio (i.e.100%), the ratio of the two shall be close to each other around 50% (as per this study). However, the closeness shall disappear in relation to movement in C.D. Ratio (either side) from that particular level, nevertheless, it remains judicious. The gap between the two explains proper utilisation, under-utilisation and misutilisation of funds. This can be explained with an example. Lower C.D. ratio conveys less potential for lending. Under such circumstances, the RRB should maintain the deposits either with sponsor bank or other banks (in the form of money at call, short notice and other types) depending upon the requirement of funds in the near future. This maintenance shall be reflected in the ratio calculated (i.e. balances to deposits). Failure to do so, shall mean under-utilisation of funds which can be seen from the ratio i.e. non-judiciousness. Further, the effect will be that the RRB would loose interest which otherwise could have been earned and added to the income.

When the C.D. Ratio is, say, 150% then the borrowings will be more which shall again be reflected in the ratio (i.e., borrowings to advances). If not, RRB might have defaulted maintaining CRR & SLR for which it had to pay penalties. In this way, the income of RRB shall be affected and accordingly profitability also. When the same RRB resorts to borrowings and maintenance of balances, then the ratios has to be maintained so as to be judicious and failure to bring conformity shall ultimately affect the income and profitability.

In the case of profit making RRBs, the judiciousness can be seen from the closeness between the two ratios given below when the C.D Ratio stood at 105% for all sample profit making RRBs.
% age of borrowings to advances - 54.8%
% age of balances to deposits - 53.9%

Why Losses

One uniform reason for making loss was the low level of business and non-judicious allocation of resources and borrowings. Low level of business can be seen from the table given below. The non-judiciousness can be seen from the following two ratios:
% age of borrowings to advances - 50.8%
% age of balances to deposits - 42.5%

Since the average C-D ratio for loss making RRBs stood at 100%, the % age of balances should have been around 50%. This non-judiciousness affected the income of the RRBs considerably.

Another reason for incurring loss was the combined effect of low per branch staff strength and low per employee productivity. Had the RRBs maintained the required level of staff strength, the actual per employee productivity would have gone down still further.

The judicious and non-judicious deployment of internal resources and borrowings can further be seen from the comparison made between profit making and loss making RRBs with same age group and geographical status. For the purpose of deciding the same age group, the study considered the duration (i.e. 365 days) as the sole criteria. With regard to geographical status, the territorial boundary of the whole state is considered as having same geographical status although it may (and is) not be true in some States, at least.

GURGAON GR. BANK (GGB-PROFIT MAKING) & HARYANA KSH. GR. BANK (HKGB-LOSS MAKING)-STATE HARYANA- YEAR 1975-76

The GGB (Pl. see the table for statistics) made profit of Rs.5.27 lac during the year 1986. This might be due to the reason that:

1) On the one hand it maintained 63.8% of deposits as balances with banks which earned interest and on the other, dispensed credit more than double that of deposit mobilised, resorting to heavy borrowings (borrowings were more than the deposit.
2) The good recovery percentage (54%) had helped
3) The quantum of interest earned by the bank by keeping balances with other banks and more advances coupled with good recovery enabled the bank to earn profit after paying interest on deposits, borrowings and salaries to the staff.

The Haryana Ksh. Gr. Bank belonged to the same age group and geographical status, incurred loss to the extent of Rs. 25.34 lac. The reasons for the loss could be:

i) It had to pay more interest on deposit than that paid by GGB;
ii) It did not earn much interest by keeping surplus funds with other banks (although this RRB kept little more than the amount kept by GGB, it kept only 43% of deposit as balances as against 63% maintained by GGB; and
iii) It did not expand its credit dispensation by resorting to borrowings from NABARD and sponsored bank as done by GGB. Proportionately speaking, it could have maintained atleast Rs. 1410 lac as against Rs. 954 lac and borrowed atleast more than Rs. 2200 lac as against Rs. 321 lac at a lesser interest rate (the current rate is 7%).

Comparison between Basti GR. Bank (BGB- profit making) & Bareilly KSH. GR. Bank (BLY.KGB-loss making): state: U.P. Year 1980

The BGB made profit of Rs. 3.82 lacs. The reason for earning such profit might be due to:

1) 75.28% of total deposit maintained as balances (surplus funds) at call and short notice which fetched interest @ 11%.
(2) 63.3% of advances made were through borrowings at a lower interest rate; and
(3) Despite the CD ratio being maintained at 51.5% the bank could earn profit mainly due to the higher margin of interest between earned and paid.

The Bly. K.G.B. made loss to the extent of Rs. 30.97 lac. The reasons for huge loss might be due to:

(i) Lesser deposit mobilisation in relation to branch network. The per branch deposit of BGB was 14 lacs (approx.) and BKGB was only 8.57 lacs. Had the RRB mobilized more deposits and kept it at money at call, the interest earned would have added to the income and reduced the loss.
(ii) The deposit kept as balances was only 50% as against 75% kept by BGB. Had it kept the proportionate deposit and resorted to borrowings for advances, it would have also reduced the loss to some extent.
(iii) The accumulated loss of Rs. 90.48 lacs was another reason for the huge loss.

Viability of RRBs

The Dantawala Committee (page No. 64 to 67) findings that an RRB with 50 branches become viable (a profit making institution) at the loan business level of 3 to 4 crores which could be expected to be reached in about 3 to 4 years and the findings (on period as six years and borrowing and deposit ratios as 55:45 to 60:40) of AFC Study (Supra) on viability (page No. VII/6 to VII/14) remained as a FAR CRY which is evident from the findings of this study. It, therefore, conveys that the viability of RRB neither depends upon the period nor volume of business alone but on other factors as well such as judicious deployment of internal resources and borrowings, per employee productivity, per branch volume of business and per branch staff strength etc.

Based on the ratio calculated on the above lines for all profit making sample RRBs and, after eliminating the ratio of those RRBs,. i.e., which have reached extreme levels in any one or more of said indicators, the following MODEL has emerged with proper adjustment through the application of RANGE method, for an RRB to become viable after attaining the age of 6 years at various levels of CD ratios.

This is only a sample model which explains the level at which the RRBs would be viable provided the various indicators as above said are taken into account. In other words, at a different level of C-D ratio, a completely different model may emerge if appropriate adjustments are made among the indicators spelt out in the Model

However, while making such adjustment (in any one or more indicators) the RRB must take extra-caution to bring judicial decisions and failure to do so shall ruin the RRB totally (and may bring the profit making RRB into loss-making RRB) which had happened with respect to all Sample Loss-Making RRBs.

Table II Sample profit making regional rural banks (as on Dec' 86) (Rs. in lacs)

S. No.	Name of R.R.Bs.	C-D Ratio	Year of existence	No. of Brs	Deposits	Advances	Income	Expenditure	Profit	Staff strength		Borrowings			Balances with Banks		Money at call & short Notice	
										Offs	Others	Spn Bk.	NABARD	Other Banks	Spn. Banks	Other Banks	Spn. Banks	Other Banks
1.	G.G.B	210.6	28 3.76	112	1435 00	3025 22	373 94	368.67	5 27	251	301	200.00	526.11	842.39	202.46	88.27	625 00	—
2.	P.G.B	62.2	6.7 78	134	2869 99	1783 82	388.58	353.04	35.54	334	325	1.97	347 48	—	1002.05	248.21	—	—
3.	T.G.B.	114.2	21 12.76	77	2204 80	2516 93	508 15	492 56	15 59	241	295	337 66	837 00	85.07	962.18	78.98	—	—
4.	M.K.G.B.	46.6	10.11.76	150	3648 97	1700 01	355 50	339 76	15.74	263	250	24 00	765 01	—	545.96	108.52	33.32	3.01
5.	P.K.G.B.	51.6	15.5 80	72	1373 48	708.11	181 86	162 18	19 68	143	102	78.75	352.78	—	1100.20	—	—	—
6.	M.B.K.G.B	153 0	31.3.79	89	921 56	1409 84	170 79	163 09	7.70	176	81	78.28	746.16	—	137.14	8.56	100.00	100.00
7.	R.S.G.B.	60.2	20.12 76	79	1391 20	838.03	171 91	166.71	5 20	146	103	44 01	301 25	29.79	42.06	42.00	815.00	—
8.	G.K.G B.	53 5	2.10 75	192	6125 54	3279 26	873 76	782 82	90.94	518	403	201.60	1655 60	10.64	426 05	19.02	5367.00	—
9.	B.G.B.	51 5	1.8.80	89	1254 00	646 00	162.50	158 68	3 82	172	107	—	409.00	—	—	—	944.00	—
10.	M.G.B.	166 4	16 8 76	198	3964.00	6595.00	760 00	741 01	18.99	490	723	1247.70	2695 35	79.20	1224.00	2 59	—	—
11.	S.M.G.B.	198.4	11.12.76	144	3171.36	6293 27	731.19	708.22	22.97	336	706	1414.00	2301 00	164.00	251.36	7.70	659.00	—
12.	P.G.B	150.3	9.3.77	150	2005 20	3013 55	442.94	139.45	3 49	290	374	573 60	880 58	230.27	1194.98	39 37	—	—
		104.7		1486	30365.10	31809 04	5121 12	4876 19	244 9	3360	3750	4201.57	11817.3	1441.36	7088 44	643.22	8543.32	103.01
Average per R.R.B.				124	2530.40	2650 70	426.76	406 35	20.41	280	313	350 88	984.78	120.11	590.70	53.60	711.90	8.58
Average per Branch				—	20.43	21.41	3.45	3.28	16	2 26	2 52	2.83	7.95	.97	4.77	43	5 75	.06
Average per employee					4 27	4 47	0.72	0 69	0 03			0 59	1 67	0.20	1.00	0.09	1 20	—

Table III Sample loss making regional rural banks (as on Dec.' 86) (Rs. in lacs)

S. No.	Name of R.R.Bs.	C-D Ratio	Year of existence	No of Brs.	Deposits	Advances	Income	Expenditure	Loss	Staff Strength		Borrowings			Balances		Money at call with banks	
										Offs.	Others	Spn Bk.	NABARD	Other Banks	Spn. Banks	Other Banks	Spn. Banks	Other
1.	H.K.G.B	66.0	2.10.75	81	2210.00	1459.00	208 60	233.94	25 34	129	181	50 00	271 00	—	201.00	—	753.90	—
2.	H.G.B.	47.0	23.12.76	91	2681.24	1259.74	349.37	363.94	13 93	127	196	23.00	174 18	21.27	91.14	4.34	1296.03	—
3.	J R B	34.5	12.3.76	94	1493 20	515.12	163 24	182 84	1960	208	114	—	228.06	—	238.48	42.50	925.00	—
4.	L.G.B	92.8	29.7.80	80	1094.44	1013.09	10 13	35 93	25.80	144	153	72.89	109 19	81.11	84.61	84.61	187.76	—
5.	K.K.G.B.	131.8	23.12.76	164	1629 98	2148 79	256 42	301 20	44 78	266	192	204 00	1334 47	20.11	766.00	—	—	—
6.	S K G B	60.2	31 3.79	74	940.87	566.35	68 19	93 52	25 33	47	155	—	140 20	—	275.03	—	65.00	—
7.	B.G.B	177.5	23.6.80	85	607 18	1078.01	117.46	150.86	33 50	169	119	215.98	500.54	—	40.67	—	—	—
8.	B.K.C.B	123.91	26.3.77	82	952.92	1180.79	166 08	196 95	30.87	189	159	91 09	621 58	70.28	—	509.98	—	—
9.	BL.K.G.B	78.5	25.12.76	82	2023.06	1587.63	200.61	214 69	14 08	116	120	13 87	359 88	—	47.09	19.41	61.00	600.00
10.	Bly K.G.B	54.3	27 9.80	77	659 86	358.06	60 03	85 11	30 79	153	65	37.22	182 18	—	101 48	2.59	62.00	164.50
11.	K.G.B.	81.5	26.12.78	41	444.23	362.06	60.03	85 11	25.08	78	60	35 00	85 79	50.32	12.29	—	225.00	—
12.	J.G.B.	68 7	26.12.78	48	515 92	354 66	71.84	93 27	21.43	63	61	71.00	137.38	2.57	39 05	—	298 00	—
13.	M.G.B	118.6	26 8 76	218	2647 82	3139.74	410 43	485 10	31 89	358	387	633 36	1086.44	—	160.82	101 48	710.00	6.03
									122 64	390	197	857.88	1508 71	31.35	91.26	242.95	10.00	—
15.	C.G.B.	164.0	2.10 76	115	1380.27	2264.10	242 30	292 97	50 67	258	143	647 11	813.89	4.26	210 02	—	331.50	—
				1483	21142.21	21257 3	2766 27	3271 90	515.73	2695	2302	2952.40	7513.48	281 27	2358.94	1111.01	4758 53	764.53
Average per 100.5 R.R.B.				99	1409.48	1417 15	184.42	218 13	34.38	180	153	196 82	500.90	18.75	157.26	74.07	317.10	50.97
Average per branch					14.26	14.33	1.86	2.21	0 35	1 82	1 55	1.99	5.06	0 19	1.59	0.75	3.21	0.52
Average per employee					4.33	4.25	.55	65	10	—	—	0.59	1.50	0.06	0.47	0.22	0.95	0.15

(Contd on page 34)

Liberalising rural lending

Pramod S. Bhatnagar

Rural Banks are reported to be running into losses. Reason—low rate of recovery. To improve the recovery climate, the author feels, there should be incentive relief for timely repayment. The consequent reduction in the income of base level institutions can be counter-balanced by the gains from better recycling of funds. The author also calls for urgent steps to liberalise the credit facilities in rural areas.

THE REPORT THAT 141 REGIONAL RURAL banks out of 191 have accumulated losses of about Rs. 90 crore may lead one to regard rural sector a bottomless pit in which the more money we sink, the more we lose. The impression is erroneous as losses in rural transactions should not be interpreted as applied to other financial operations. Concession on farming credit announced by Finance Minister in his recent budget speech should be viewed in the spirit only.

In fact the National Bank for Agriculture and Rural Development (NABARD) and other specialised agencies do not meet the credit requirement of farmers adequately. Though agriculture accounts for more than a third of national income, its total share in gross bank credit is only 17 per cent. Medium and large industry walk away with 36 per cent of the credit though their share of national income is less than 20 per cent.

NABARD has been providing refinance facilities to base level institutions with a view to encourage lending in agricultural and rural sector. Refinance is channelised mainly through four agencies, viz. commercial banks (CBs), regional rural banks (RRBs), state land development banks (SLDBs) and state co-operative banks. SLDBs deal with long term lendings and SCBs are concerned with medium and short term operations.

Long and short term structures

Long term structure does not raise deposits from public like other banks and therefore depends on NABARD refinance, market borrowings and its own resources. Short term structure consisting of state cooperative banks at state level, a district central cooperative bank (DCCB) at district level and a primary agricultural credit society (PACS) at primary level mobilise deposits. However, deposits raised by PACS are very small and most of their advances are made out of borrowed funds. At the end of June, 1987, there were 91749 PACS with deposits of Rs. 625 crore and an outanding amount of Rs. 4800 crore. Cooperative credit reaches the farmers mainly through PACS but in some cases direct lending is also done by a DCCB and SCB branches. As at the end of June, 1986, the outstanding advances of these agencies were Rs. 1770 crore and Rs. 1720 crore respectively.

The Reserve Bank of India had laid down an interest rate schedule at which the ultimate borrower should get loans from credit institution. These interest rates, with a view to have uniformity in the lending rates, do not make any distinction between lending agencies.

NABARD refinance

For long term credit structure NABARD provides refinacne at an interest rate of 6.5 per cent per annum for most of the activities and the rate of interest chargeable from the borrower is 10 per cent leaving a margin of 3.5 per cent with LDBs. Secondly, 95 per cent of loans by LDBs for minor irrigation and special programmes can be claimed as refinance from NABARD. The scale of refinacne for these two activities is 90 per cent for CBs and RRBs. However, most of the LDBs. have not been able to break even at given margin of 3.5 per cent on account of bad debts and non viable size of operations. A suitable incentive for repayment can improve recovery performance and can also reduce the total portfolio of bad debts. If collection is made from the residence of borrowers, recovery is bound to be better. In the present system, recovery teams visit villages as a part of a drive and not as a regular activity. Some incentive for timely repayment and collection of instalment due from work place/village of borrower are likely to improve repayment climate.

However, both of these suggestions have financial implications. Therefore, refinance from NABARD for certain selected activities, like minor irrigation may be provided to LDBs at an interest rate of five per cent only. An additional margin of 1.5 per cent will enable them to give one per cent incentive on timely repayment, improve their viability and would also enable them to deploy some field staff for affecting better recovery.

In the short term structure, the NABARD refinance flows through SCBs, DCCBs and PACS. At present general line of credit is made available by RBI at an annual interest rate of six per cent and the same is made over to the SCBs at seven per cent. Margin available to NABARD is meant to cover the cost of its functions. SCBs provide these funds to DCCBs by charging additional 0.25 per cent. PACS receive thesefunds at the rate of 8.75 per cent for small farmers and 9.75 per cent for others. Thus a DCCB has a margin of 1.5 per cent in the case of small farmers and 2.5 per cent in case of other farmers. Lending rates of PACs to members depend upon the quantum of loan and are normally within a band of 11.5 per cent to 14 per cent. One per cent additional margin to PACS can also give incentive for prompt repayment.

Cheaper funds needed

It is necessary to provide cheaper funds to RRBs also at par with the cooperative banks. RRBs mostly lend to the small farmers for which interest rate is low and have to bear the burben of DICGC premium on all accounts. Further, in view of their large number of branches at small places, business per branch is also lower than the break even level. RRBs should also be given cheaper NABARD refinance and provided incentive of prompt repayment upto one per cent.

It may be difficult, from practical point of view, to maintain different interest structure for the fourth agency, namely, commercial banks. When LDBs, PACS and RRBs would be providing incentive for timely repayment the commercial banks would also be forced to do so otherwise recovery of their loans is likely to go down. However, in view of their limited exposure to rural lending, they can afford to bear one per cent margin out of their own funds. At present the collection of current dues of commercial banks is nearly Rs. 2150 crore and an incentive of one per cent would mean an additional cost of Rs. 21 5 crore.

Total schematic lending by NABARD during 1986-87 was Rs. 1334 crore and out of these 35 per cent were for minor irrigation and 14 per cent for farm mechanisation. At present banks provide loan only for buying new tractors and NABARD does not support refinance for second hand tractors. Of late, some circles had recommended that farmers may be given loan for purchasing second hand workable tractors which are not more than three years old. It was mentioned that a good number of farmers want to avail facilities of second hand tractor since it is cheaper. On the other hand some well to do farmers want to replace their old tractors by a new one. NABARD should, therefore, provide refinance facilities not only for the tractors but also for second hand tractors.

Rebate rate

Cost of one per cent interest rate for timely payment can be worked out for NABARD on the basis of its average outstandings. The estimated cost at the present scale of operations would be Rs. 75 crore per annum. This, however, would increase with expansion of business but would be within manageable limits since total income would also go up.

These proposals should make rural refinance cheaper by one percentage point for short term cooperative credit and 1.5 percentage point for major items in the business of LDBs and RRBs. Since the scale of refinacne is higher for LDBs, their gain would be a little more. When a relief to borrower for timely repayment is given it will reduce the income of base level institutions also. This should be counter-balanced by the gains from better recycling of funds. As far as public sector banks are concerned, they would be giving this concession without getting any corresponding concession from NABARD. The collections of public sector banks in agriculture sector were Rs. 2675 crore during the year July 1986-June 1987. Assuming that Rs.2150 crore came as timely repayment, the benefit to the farmer borrower would have been of the order of Rs 21.5 crore. With improved recovery and increased involvement of public sector banks in the agricultural sector, this liability can be upto Rs. 30 crore during the last year of Seventh Plan.

While incentive for timely repayment should improve recovery climate and thereby recycling of funds additional expenditure by NABARD will reduce the amount available with it for augmenting its resources. Expansion of schematic lending by NABARD may slow down to the extent surplus profits are utilised for giving incentive relief to farmers. This factor will also apply to other lending institutions. Outstandings of NABARD have gone up from Rs. 5293 crore to Rs. 7483 crore between June 1984 and June 1987. Secondly during these three years Rs. 615 crore were added to National Rural Credit Fund and stabilisation fund both put together. This has considerably improved the share of cost free funds in the operations of NABARD. The figures as at the end of June. 1988 should be still better. NABARD, therefore, is in a position to provide concessions amounting to Rs. 70 crore to Rs. 100 crore during 1988-89 and 1989-90, to cooperative banks and RRBs. □□□

(Contd from page 28)

must be reduced and rural income per capita must be substantially raised. Income growth in the rural sector is not expected to come as a manna from the heaven but it requires a well-thoughtout policy framework. One of the essential constituents of such a policy parameter would be the growth of investment at a suitably enhanced rate in the rural sector. This can be justified not only in terms of greater equity and efficiency (See, B.N. Ghosh op. cit) but it can also be warranted for the purpose of generation of substantial savings in the rural sector. The saving argument of investment criterion favouring more and more allocation of resources in the urban sector for the generation of more saving and surplus does not seem to be empirically valid in a developing country like India. The sooner we get rid of such anachronistic notions, the better it is for the nascent nation. □□□

Sri Visakha Grameena Bank-an evaluation

Dr. M. Sundara Rao & K. Uma Mahesh Patnaik

The article examines the performance of the Grameena Bank in the three districts of Srikakulam, Vizianagaram and Visakhapatnam of Andhra Pradesh. Spelling out the bank's main objectives, the author analyses its performance vis-a-vis its objectives. While the bank's growth has been phenomenal, its contribution in the implementation of the Integrated Rural Development Programme (IRDP), Integrated Tribal Development Agency (ITDA) and Massive National Assistance Programme (MNAP) in the three districts of its operation has been laudable, says the author.

UNDER THE REGIONAL RURAL BANK'S Act 1976, Sri Visakha Grameena Bank (SVGB) sponsered by the state Bank of India, was established on 30th September, 1976. The SVGB has been conducting its banking operations in Srikakulam, Vizianagaram and Visakhapatnam districts. The area of operation of a bank is normally confined to a radius of 20 kms. Within the radius of 20 kms. the branches do not sanction advances in other than the villages adopted or in the villages already effectively covered by other banks.

Objectives

The main objectives of SVGB are (1) To imbibe the local co-operatives and banking discipline of commercial banks (2) To help specifically weaker sections and for promotion of local employment (3) To reduce the dependence of the rural poor on local money lenders (4) To serve as an instrument for implementation of 20 point economic programme in rural areas and to develop banking habits by offering all types of deposit schemes (5) To promote lowest banking structure in the rural areas (6) To extend credit facilities with simplified procedures to the rural areas for development of agriculture, trade, commerce, industry and other productive activities; and (7) To meet the credit requirements of small and marginal farmers, agricultural labourers, rural artisans, and small entrepreneurs.

In the present study to evaluate the performance of SVGB during the period of 1976-1985 the following indicators are selected.

Branch Expansion

In financing the weaker sections through the operation of branches in unbanked areas, the SVGB has developed significantly during the last 10 year Table-1 presents the position of branch expansion and

Table 1

Progress in Branch Expansion of SVGB 1976-85.

Year	No of Branches	No of Villages covered
1976	7	162
1977	21	780
1978	67	1500
1979	77	1950
1980	102	3125
1981	112	3215
1982	121	3376
1983	135	3476
1984	151	3620
1985	168	3675

Source Annual Reports 1976 to 1985, SVGB

the number of village adopted by the SVGB during 1976-1985. During its first year of operation (1976) the bank had opened only 7 branches and the number has risen to 168 by the end of 1985. The number of villages covered by the bank as on December, 1985 has risen to 3675 from 162 at the end of the year 1976. These two aspects indicate that the banks performance in branch expanision and villages covered during 1976-1985 is encouraging.

Growth of deposits:

The growth of deposits of the bank during the period 1976-1985 is given in Table -2. The deposits of the bank

Table-2

Growth of Deposits of SVGB 1976-1985

(Rs. in lakhs)

Year	No. of accounts	Amount of Deposits
1976	2,595	47.30
1977	39,263	224.68
1978	95,055	452.25
1979	1,34,542	768.27
1980	1,86,201	1,281.40
1981	2,47,284	1,882.67
1982	2,89,617	1,944.83
1983	3,13,545	2,200.90
1984	3,39,722	2,554.90
1985	3,67,822	2,842.53

Source: Annual Reports 1976 to 1985, SVGB

have risen from Rs. 47.30 lakhs with 2595 depositors as the end of December, 1976 to Rs. 2842.53 lakhs along with 3,67,822 deposit accounts by the end of December, 1985. When the per capita deposits are considered it is Rs. 772 in the year 1985. A significant feature of the deposit growth of the bank is the enlargement of individual accounts to 74.70 percent of the total deposits in the year. 1985.

Growth of advances:

Table-3 presents the trends in the advances pattern

Table-3

Growth of Advances of SVGB 1976-1985

(Rs. in lakhs)

Year	No of Accounts	Advanced Amounts
1976	2,448	10.63
1977	32,209	176.22
1978	1,00,614	906.25
1979	1,44,985	2,408.71
1980	1,71,849	2,713.36
1981	2,05,473	3,343 18
1982	2,07,655	2,484.89
1983	2,09,889	2,675.66
1984	2,20,656	3,095.46
1985	2,40,272	3,728.64

Source: Annual Reports 1976 to 1985, SVGB

of SVGB during the study period. The disbursed credit of the banks is of Rs. 10,63 lakhs to 2,448 borrowers in the year 1976. The per capita credit and per branch credit works out to Rs. 473 and Rs. 1.51 lakhs respectively. The amount disbursed in the year 1985 is recorded as Rs. 3,728.64 to 2,40,272 borrowers. The per capita credit in 1985 works out Rs. 1,552. There has been 10.62 percent of growth in per capita credit in 1985 over 1984. Similarly the percentage credit increase in 1985 over 1984 relating to per branch credit recorded to 8.25. This performance clearly shows the bank's commitment to the weaker sections who really need help from the developed banks.

A look at the loan amount disbursed by SVGB under different sectors during 1977-1985 shows that there was considerable growth in case of agriculture sector in the total advances given by SVGB in 1985 when compared to 1977. The sector-wise analysis shows that the highest percentage of advances went to agriculture (15.90) and allied sectors (25.80). We have found that only 22.28 percent share went to non-agriculture sector even in the year 1985. Thus the advances given to non-farm sector is very meagre and inadequate.

Recovery position

The Bank's overall performance in loan recovery is given in Table-4

Table -4

Recovery Position of SVGE

(Rs. in lakhs)

Year	Demand	Collection	% Recovery
1979	714.36	574.38	80 40
1980	1075.46	795 84	74.00
1981	780.29	565.19	74 23
1982	1952.46	1331 71	66.36
1983	1974.02	1358.77	68.83
1984	1839.88	872 61	47.44
1985	1879.24	831.87	44.27

Source: Annual Reports 1979 to 1985, SVGB

There is a decline in the recovery performance of the bank on whole due to the prevailing drought conditions in most parts of the area of its operation. As far as the sector wise performance is concerned the highest percentage of recovery (51.77) is recorded in agricultural cash credit when compared to the other sectors in 1985. Next comes non-agricultural sector with the percentage of recovery of 47.44 in the same period. The lowest recovery can be found in agricultural term loans.

It may be noted that the percentage of overall revovery (Table-4) is declining at increasing rate, 80.40 percent in 1979 to 44.27 percent in 1985.

The causes for the overall declining trend in recovery performance may be the following.

(a) Even though the bank has given loans in kind, the loans are not properly utilized for productive purposes.

(b) As most of the borrowers are illiterates they are under the impression that these loans need not be repaid.

(c) The serious draw-back in loan recoveries may be that the bank is not free from political interference in giving advances as in the case of co-operatives.

(d) The last and most improtant reason is that generally the revovery of loans depends on the volume of advances given by the bank. As advances increase, naturally the recovery performance declines.

Credit-Deposit Ratio

Table-5 shows the credit-deposit ratio during the period 1976-1985. The credit-deposit ratio is one of the important indications to assess the functioning and performance of a bank.

As shown in the table-5, the credit-deposit of SVGB for the first two years is less than one which implies that the deposits exceed advances during this period.

Table 5

Credit-Deposit ratio of SVGB 1976-1985

(Rs. in lakhs)

Year	Credit	Deposits	Credit-Deposit Ratio
1976	10.63	47.30	0.22
1977	176.22	224.68	0.78
1978	906.25	454 25	1.99
1979	2048 71	768.27	2.66
1980	2713.36	1281.40	2.12
1981	3343.18	1882.67	1.78
1982	2484 89	1944.83	1.28
1983	2675.66	2200 90	1.22
1984	3095.46	2554.90	1.21
1985	3728.64	2842.53	1.31

Source: Annual Reports 1976 to 1985, SVGB

This may be due to the ineffective disbursal of the loans by the bank in the initial years. But starting from the year 1978, we have found that the advances exceed deposits continusously and this indicates that the functioning of the bank is encouraging by way of giving advances more to the weaker sections of the society from the deposits mobilised by them.

Net profit (Contd from page 29)

Table-6 indicates the progressive [illegible] in the business operation and net profit/[illegible] by the bank.

Table-6

Net Profit of SVGB 1976-1985

(Rs. in lakhs)

Year	Total Income	Total Expenditure	Profit/Loss
1976	1.15	0.81	0.34
1977	18.66	16.12	2.54
1978	68.16	59.90	8.26
1979	136.68	116.06	22.62
1980	22.37	191.94	30.43
1981	291.50	268.98	22.52
1982	361.90	303.87	58.03
1983	404.30	398.57	5.78
1984	470.57	469.65	0.92
1985	527 29	562.62	—35.33

Source: Annual Reports 1976 to 1985, SVGB

The Net Profit achieved by the bank is highest i.e. Rs. 58.03 lakhs in the year 1982. The decline in the profitabilty of the bank in succeeding year may be due to the increase in the staff, increase in the rate of borrowings, increase in the rate of interest payable to depositors etc. It is interesting to mention that the bank has for the first time incurred net loss of Rs.35.33 lakhs during the year 1985. The main contributing factor for the decline in the profitability of the bank as a whole is due to increased higher rate of interest bearing deposits like Time Deposit Receipt (TDR'S) and special TDR'S from personal/individual segment. Another factor is that the bank has increased the floating reserve to 2 per cent of the outstanding advances as against 1½ per cent provided in 1984. The opening of 17 new branches and the considerable increase in per staff establishment expenditure etc., resulted in the overall loss to the bank in the year 1985.

SVGB has participated in the implementation of Integrated Rural Development Programme (IRDP), Integrated Tribal Development Programme (ITDP) and Massive National Assistance Programme (MNAP) in the three districts of its operation in a massive way, achieving implementation of 91.33 per cent of the IRDP programme and 63.25 per cent of the ITDA programme targets alloted to the bank for the year 1984-85. Thus SVGB has become synonymous for weaker section finance in the three districts. The targets under IRDP sector for the year 1985-86 slashed to 62 per cent of the previous year's targets for fresh lendings.

In accordance with the Government's new 20 point economic programme, SVGB is financing fresh schemes as a second dose of finance to genuine and needy borrowers who are still below the poverty line despite banks financial assistance. The bank has succeeded in projecting the image of a "Small Man's Bank" in the region. The absolute performance of the bank in terms of selected indicators of business has been encouraging. ☐☐☐

Viability model for an existing RRB

(After completing 6 years of age)

(Rs. in lac

Indicators	C-D Ratio Above 100%	60-100%	Less than 60%
1. Per employee productivity*	7.5 to 9.0	8 to 10	8.5 to 10.5
2. Per branch volume of business**	40 to 65	28 to 35	21 to 28
3. Per branch staff (in nos.)	5 to 7	4 to 5	3 to 4
4. %age of borrowings to advances	50% to 60%	30% to 50%	20% to 30%
5 %age of balances to deposits	55% to 65%	60% to 75%	75% to 95%

*Per employee deposits & advances
**Per branch deposits & advances

Note An RRB can make profit even if the per employee volume of business is less than 8 lac. It is however, safe to maintain atleast 8 lac in view of the fact that out of 12 sample RRBs selected the per employee productivity was above Rs 8 lac in the case of 9 RRBs

The reason for higher per branch staff strength in the case of RRBs whose CD ratio is above 100% is due to the fact that more advances require more staff to deal with additional loan proposals and connected pre-sanction appraisal and post-sanction follow up of the project loan accounts. However, such staff strength is not required in the case of less CD ratio RRBs.

What should be done

The loss, if any, incurred by an RRB upto 6 years of age, may be shared by Sponsor Bank, State Government and NABARD in proportion to share capital, (i.e. 50%, 35% and 15%). When the RRB enters the 6th year it should try to maintain the level of the indicators as given in the viability model at various levels of CD ratio to avoid loss. The sponsor bank may keep the surplus funds of RRBs in short term securities which will fetch higher return. The Chairmen of RRBs may be appointed from among the RRB employees as against the present system of nomination made from sponsor bank. At present, promotion avenues available to RRB employees is upto General Manager only. If one more avenue is opened for them, their contribution may be still more, Although Kelkar Committee did not touch this point, it is expected that the Aggarwal Committee presently sitting on Staffing pattern of RRB employees shall look into this aspect. ☐☐☐

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‸et us call a spade a spade .....

ʻ all the different jargons that are in vogue today, ‸pressions like conservatism, revivalism, ndamentalism and,to crown all, secularism are ›t favourites of the patrons of politics. Not that ese high-sounding and imposing words are ›llow and bereft of any meaning. But the trouble that their interpretations vary from the llowers of one camp to the supporters of the her. What is denounced as fundamentalism ʻ one set of people is declared a justifiable sertion of rights by the other set. Thus mest, simple and earnest common man, in s endeavour to fathom the depth of the impact of ese multisyllable, megaton terms, is treated to a wildering confusion. To his utter dismay he ıds leaders of opinion, persons of high social atus, men who enjoy the reputation of moving e masses, in total disagreement over the final d real meanings of these menacing expressions !

ıe common man is in a fix. It is very difficult for m to decide which explanation to accept and ıich to discard. He cannot afford to ignore them ‸her as they emanate from highly authoritative urces. He is also aware that these explanations, wsoever at variance they are with each other, ncern his life, his surroundings and his future. ıy, they have a potent bearing on all spheres of › activities and those of his fellow men. He cannot keep himself aloof from the controversies floating around him. Perhaps he cannot remain impartial for long. The day he chooses to be a part of a particular crowd, he ceases to be what he was. He would be branded with a label. That is what the pedlars of political-wares want. That is how their respective ranks swell.

It sounds incongruous, yet it is a fact that on festive occasions and events of rejoicing like Holi and Id, police bandobust has to be made in our big and small cities. This is done to protect the common man, who is law-abiding, from any untoward incident. There is always an apprehension that one group of label-holders might start some trouble, sometime in collusion with another group. It is a sad state of affair, but, unfortunately, it is true. And, pray, who is to be blamed for this ? Definitely those leaders who have not educated their followers to behave ! The blame squarely lies at the door of those persons, who supposedly playing the role of the moulder of public mind, have blatantly used the masses as instruments for the achievement of their own ambitions or objectives.

Agreed that we cannot wipe out all our differences. We cannot think of any society where differences do not exist. It would be really bad if there was one. For, monotony shall reign supreme there.

Luckily for us India has been a cradle of many cultures nurtured over the centuries by communities of various faiths. Not that they have not clashed or quarrelled or fought with one another over matters petty or grave. They have. And yet the common bond of Indianness has held them together. Partition was traumatic and shocking. Perhaps it was unavoidable, and as a result, people on both sides had to meet untold miseries. But one lesson we must learn. We shall never allow anyone to weaken our unity nor endanger our territorial integrity in the name of belief, language or culture. Leaders have to learn a few facts from history before they plan to teach their followers.

Is it not strange that religion — any religion for that matter — which directs its believers to adopt good-neighbourliness, tolerance, respect for life, and love for mankind, should be turned into a vehicle for carrying out nefarious designs and causing disruption ? Everyone agrees that religion brings people closer; it does not tear them apart. Moreover, religion is a matter of personal faith. Why should we make a public demonstration of it ? There are places of worship where one can offer any amount of devotion, any number of prayer. When we bring religious processions on the roads, we should search our hearts to find out what we mean by doing so. Is it not a fact that the idea of the show of strength, the joy of the exhibition of an organised force, gets precedence over the sublime sentiments of submission to the Supreme Being ? Faith is not meant to be paraded in the streets; it is to be nursed and cherished in the hearts. Let us go to history and try to know if our sages and spiritual leaders ever allowed such demonstrations in their life-time. In fact, they enjoined upon their followers to strictly avoid the personality cult. What we observe today is just the reverse. Perhaps it would not be out of place to quote the great poet Ghalib, as a conclusion:

نہیں کچھ سبحہ و زنّار کے پھندے میں گیرائی
وفاداری میں شیخ و برہمن کی آزمائش ہے

(Nahin kuchh Sabha-o-Zunnar ke phande men gira-i, Wafadaari mein Sheikh-o-Barhaman ki aazmaish hai)

(There is hardly any hold in the knots of the rosary and the sacred thread. The real test of the Sheikh and the Brahmin lies in the sincerity of the devotion and loyalty to the faith.)

— Chief Editor

The time to act is now !

V.R. Krishna Iyer

The secular process is the warp and woof woven into our national fabric, because it signifies not an abstract doctrine, nor philosophical creed, nor cultural luxury, but the living substance of the finer strands of our composite heritage, says former Justice, Supreme Court of India, V.R. Krishna Iyer, in a very illuminating article that follows. He has, in his typical judicious style, discussed threadbare the reasons of adamant existence of fundamentalism and the resultant phenomenon of the pale profile of secularism. His incisive pen has spared no one and the cut is deeper and sharper where politics of power comes under the glare of his microscopic eyes. Being a jurist of exceptional calibre, and having a high sense of commitment for a cause he holds dear, his interpretation of the articles of the Constitution related to secular ideals, makes an enlightening reading. What he has said may not be palatable to many, but none can dare doubt the sincerity of his views and the clarity of his vision. Despite a quantum jump in communal eruptions in the country, aided by foreign funds and unfriendly hands, the author is confident that the Indian masses are invincibly secular and compassionate in fellowship. What we require is to use the principled technology of profound humanism, he concludes.

THE SECULAR PRINCIPLE IS the human essence and social conscience of our constitutional order. The Swaraj struggle, with marginal zigzags, was secular in its soul. The national leaders and the broad masses, by and large, battled against British imperialism with a secular sword. The several experiments in constitution-making since 1895 stressed the value of equal human rights, free from discrimination based on religion, sex or other invidious consideration. The Objectives Resolution, moved by Nehruji on Dec. 15, 1946 in the Constituent Assembly, emphasised the egalitarian elixir and other human rights germane to a secular society Finally, the Constitution, in its Preamble, the Fundamental Rights and the Directive Principles of State Policy, highlighted secular humanism and social justice as the paramount constituents of the legal order under the Indian Sun. One person, one value, be his religion or irreligion what it may. And now, to put the matter beyond doubt, the Constitution (Forty-Second Amendment) Act has expressly declared the Indian Republic to be *Secular*. Indeed, the secular process is the warp and woof woven into our national fabric, because it signifies not an abstract doctrine nor philosophical creed nor cultural luxury but the living substance of the finer strands of our composite heritage and the inevitable imperative of sensitive, sensible

INDIA : A CONFLUENCE OF CREEDS

social engineering, in the given demographic texture of religious pluralism, inflammable fundamentalism, pervasive communalism and historical antagonism. The pathological aggravation of fissiparous forces and pollutive proliferation of disintegrative tendencies were the deleterious fall-out of bleeding Partition and wounded Independence.

it's time to act

OUR FOUNDING FATHERS WORKED, not in vacuo, but in the burning milieu of mutual mistrust and hotting up hatred; and there was a magnetic man of small build but tall structure—Gandhi is his name—whose distant presence, universal essence and powerless power fascinated the whole nation and shook and shaped the thoughts of the members who debated and voted along secular fundamentals. So it is that textually we have a Constitution whose soul is secular, though with marginal compromises, but actually its wobbling voyage through time and space makes us wish that its captains of Power had more creative realism, more courage and conviction, more resistance to the besetting sins of electoral opportunism and surrender to communal pressure, than the national navigation has yet displayed. Even so, looking around, we find ourselves surrounded by Islamic States, unblushingly anti-secular and provocatively theocratic, and in this indivisible world the ill-winds that blow from them infect the Hindu-Indian psyche already under stress and ready to explode. Or is Indian Secularism already a casualty? For, day after day the sombre scenario of deadly godism and escalating fundamentalism is ominous; and if *We, the People of India,* are resolved to defend the Secular Republic *the time to act is now*. The secular apparel of law is lifeless unless the spirit of Indian humanity vitalises this value in daily dealings and political praxis. This essay, for reasons of space, is limited to a few facets of the battle for secular India currently menaced from many sides, menacled by many forces and messed up by the moronic, myopic politics of power too infantile and adventurist to see beyond its nose.

"Indeed, the secular process is the warp and woof woven into our national fabric, because it signifies not an abstract doctrine nor philosophical creed nor cultural luxury but the living substance of the finer strands of our composite heritage and the inevitable imperative of sensitive, sensible social engineering, in the given demographic texture of religious pluralism, inflammable fundamentalism, pervasive communalism and historical antagonism.'

IT IS IMPORTANT TO BE CLEAR conceptually about secularism and religion and the vital ingredients of constitutionalism which strengthen the sap of secularised humanism. The emphatic and evocative opening words, "We, the People of India" are an affirmation of the coverage of all Indian humanity in the constitutional sweep, without the intervention of God or gods. Hindus, Muslims, Christians, Zoroastrians, Sikhs, Buddhists, Jains and all other religionists, men and women, on Indian earth are part of "We, the People". This secular spread-out is boundlessly all-inclusive and even a *pariah* is the formal founder of the Republic. Gandhiji on August 9, 1942, admonished:

> "... Hindustan belongs to all those who are born and bred here and who have no other country to look to. Therefore, it belongs to Parsis, Beni Israels, to Indian Christians, Muslims and other non-Hindus as much as to Hindus. Free India will be no Hindu raj; it will be Indian raj based not on the majority of any religious sect or community but on the representatives of the whole people without distinction of religion."

Nehru, in *India Today and Tomorrow,* stressed this point:

> "India is a common home for all those who live here, to whatever religion they may belong ... they have equal rights and obligations. Ours is a composite nation. In modern plural society the concept of personal faith and personal conduct must be respected. Secularism is a federal principle applied to a federal society for the welfare of the whole". He declared: "We are building a free, secular State, where every religion and belief has full freedom and equal honour, whose every citizen has equal liberty and equal opportunity." This is in keeping with the Resolution on Fundamental Rights at the Karachi Congress in 1931: "The State shall observe neutrality in regard to all religions".

a dynamic constitution

THE CONCEPT OF EQUAL SOCIAL, economic and political justice, of fraternity and dignity of the individual, of liberty in matters of 'belief, faith and worship' is a positive preambular proclamation of secularism. *Single citizenship,* be his religion what it may, (Art. 5) reinforces this value. Every Indian enjoys all the fundamental rights guaranteed in Part III regardless of religion, caste, creed, race or sex. Untouchability, which downgrades some Hindus on considerations of religious devaluation, is abolished punitively by Article 17. Nowhere is a member of a particular religion favoured or frowned upon, *qua* his religion or caste or creed or irreligion. There is both negative and positive secularism in our dynamic Constitution. Law *forbids* discrimination and *promises* equal protection—religion, sect, sex, birth or irreligion being utterly of unconcern for the State. When you seek to enforce your rights in court or tribunal, government or legislative body, nobody asks or can ask for your religion. Likewise, fundamental duties (Art 51 A) laid on citizens are

"It is fair to state that secular values govern all departments of State activity vis a vis the citizenry, irrespective of either brands of faith or theistic, agnostic or atheistic views. Basically, the State adopts the Jeffersonian philosophy of actual neutrality in our society of religious pluralism."

identical whether you are Hindu, Muslim or other. The nature of these basic national duties drives home their secular value. For instance, Art 51 A (e) obligates every Indian, whatever his religion, "to promote harmony and the spirit of common brotherhood amongst all the people and the spirit of common brotherhood amongst all the people of India transcending religious diversities", "to have compassion [(Art. 51A (g)] to develop the scientific temper, humanism and the spirit of inquiry and reform (51) A (h). Secularism par excellence ! Indeed, the great postulate of a just social order expressed in Art. 38 is dynamic secularism applicable to the whole of society, repelling any divisive or prejudicial criteria based on religion, caste or creed and emphasising economic justice, human solidarity and welfare of all. The constitutional essence of the Secular Republic is expressed with the meaningful objective ·

"The legislatures of India, in composition, operation and the laws they enact, are bound to obey the secular command. Otherwise, they violate the Constitution. The Speaker cannot favour or frighten a religious denomination nor can Parliament legislate with religious bias."

"Art. 38 (1): The State shall strive to promote the welfare of the people by securing and protecting as effectively as it may a social order in which justice, social, economic and political, shall inform all the institution of the national life."

THE DIRECTIVE PRINCIPLES OF STATE Policy, with a strong socialist flavour, mandate the state to go socialist and secularist, placing accent on such matters of human justice as free legal aid, decentralised government, just and humane conditions of work, promotion of educational and economic interests of weaker classes, health, justice to the common people, distributive justice vis a vis the material resources of the community, better agriculture and animal husbandry, elimination of environmental pollution, and a wealth of programmes of material uplift. There is no hint or whisper that the State can or will respect or reject religion or like considerations in the wide range of developmental activities, human rights or other matters of life and death. It is fair to state that secular values govern all departments of State activity vis a vis the citizenry, irrespective of either brands of faith or theistic, agnostic or atheistic views. Basically, the State adopts the Jeffersonian philosophy of actual neutrality in our society of religious pluralism. President Jefferson wrote:

"I contemplate with sovereign reverence that act of the American people which declared their legislature should make no law 'respecting an establishment of religion or prohibiting the free exercise thereof', thus building a wall of separation between the Church and the State."

The American Supreme Court, applying the First Amendment to the U.S. Constitution, prohibited religious prayers in schools. Justice Douglas explained:

"The First Amendment leaves the Government in a position not of hostility to religion but of neutrality. The philosophy is that the atheist or agnostic— the non-believer— is entitled to go his own way. The philosophy is that if government interferes in matters spiritual, it will be a divisive force. The First Amendment teaches that a government neutral in the field of religion better serves all religious interests."

free from religious bias

ADULT FRANCHISE, TOTALLY ANATHEMATISING religion's role in elections, is an insignia of secular politics under the law. *No religious criterion* for public office is permissible, constitutionally speaking. No Party based on religion, no appeal for vote based on religion, no pollution of the poll process by religious infiltration, has legal sanction. One person, one value, and one adult, one vote, is the rule of law which bears a secular badge on its bosom. The legislatures of India, in composition, operation and the laws they enact, are bound to obey the secular command. Otherwise, they violate the Constitution. The Speaker cannot favour or frighten a religious denomination nor can Parliament legislate with religious bias. Similarly, the Executive, from President and Prime Minister to Panchayat peon and last grade civil servant, is caste-neutral and faith-free when he is selected by the Public Services Commission which itself is a secular instrument. The supremacy of the Sharia or Veda or canonical law, a priestly judiciary or ecclesiastical or Quranic Court, a Hindu Judge or other legal dignitary of another religion to enforce secular laws to be appointed on theological basis, would be a monstrous unconstitutionality in India with 83% Hindus, 11% Muslims, 2.1/2% Christians, 2% Sikhs and 1.1/2% other religions. Our Constitution hates communal instrumentalities; Islamisation is obnoxious. So too the fate of other faiths when entering secular affairs. In law and life, India is a marvellous oasis of secularism. Before we conclude on this self-congratulatory note let us get a definitional glimpse of secularism.

"Constitutionally, there are enough powers with the State to regulate with care the processes of proselytisation in a country of pathological plurality of divinities. Never should the State take sides with one or other religion. The regulatory jurisdiction should not interfere with the right freely to profess any religion but may forbid false or phoney temptations for conversion of minor children or needy people."

secularism defined

THE CONCISE OXFORD DICTIONARY defines 'secular' as : 'concerned with the affairs of this world, worldly, not sacred, not monastic, not ecclesiastical, temporal, profane, lay.' Rufus M. Jones defines it as a 'way of life and an interpretation of life that includes

nly the natural order of things and that do not find God, or a realm of spiritual reality, essential for life or thought' Dr. Hu Shih brings out a secular animadversion on religion.

"The most important contribution that the religions of the world could make to modern societies in the world today would be to commit suicide"

Donald Eugene Smith, whose book 'India as a Secular State' is a notable work, suggests a working definition thus:

"The secular state is a state which guarantees individual and corporate freedom of religion, deals with the individual as a citizen irrespective of his religion, is not constitutionally connected to a particular religion nor does it seek either to promote or interfere with religion. Upon closer examination it will be seen that the conception of a secular state involves three distinct but inter-related sets of relationships concerning the state, religion and the individual. The three sets of relations are:

1. Religion and the individual (freedom of religion).
2. The State and the individual (citizenship).
3. The State and religion (separation of state and religion)."

'Political opportunists and religious belligerants offer inflated definitions truncating the secular zone or temporal areas dressed up in lofty diction. Tyros, twaddlers and tricksters also contribute to the confusion."

The sharpest expression of the rationalist view of secularism, certainly influenced by Marx who described religion as the opium of the people, is found in M.N. Roy* who pleaded for sublime secularism:

"The desire for freedom in social and political life, being an expression of the basic human urge for spiritual freedom, can be satisfied only by ... a world view which does away with the necessity of assuming a supernatural power or metaphysical sanction."

ACCORDING TO ROY, 'TRUE SPIRITUAL freedom means not freedom to choose from among various religious doctrines, but freedom of the human spirit from the tyranny of all of them!' He takes the view that in a religious ethos a secular State is a misnomer and goes further to observe tartly: 'it can only be the fraudulent means for a monopoly of secular power'. His barbed observation based on Indian conditions has a ring of truth: 'A secular State should not tolerate a vast, many-million-strong army of holy loafers who outrage the ethical and aesthetic sense of its cultural and educated citizens'. His sharp clarity shakes religious orthodoxy when he says 'secularism, the spirit of enquiry, subordination of faith to reason attaching greater importance to life actually lived in this world than to an imaginary life after death—cannot thrive until the prevailing atmosphere is radically changed.' The Oriental ring in this radical humanist accepts, as a cherished value, reverence for the human spirit but refutes as anathema God-mad religion."

THE INDIAN CONSTITUTION HAS ADOPTED the classic test contained in the pregnant precept of Jesus: "Render unto Caesar what is Caesar's and unto God what is God's" The writ of Caesar, that is State, runs where the secular sector in human affairs is regulated. God rules where the inner being of man and his deeper communion with Cosmic Power are concerned. Demarcating boundaries, with some demilitarised zone, we find our Constitution adopting a 'hands-off' doctrine in the group of articles relating to Freedom of Religion viz Arts. 25 to 30. Broadly expressed, an Indian enjoys freedom of conscience and the right to profess, practise and propogate any religion or remain atheist or agnostic as his conscience dictates. But here is a poser. If A propagates a religion, does B have the right to do counter-propaganda against that religion or every religion? It is B's exercise of freedom of speech and expression [Art. 19 (1) (a)], subject to public order, decency and morality. Moreover, if a priest has the freedom to propagate his brand of religion,a rationalist or agitated believer, whose faith is diametrically opposite, has an equal right to denounce it as part of propagating his own rationalism or hostile godism. A glance at the USSR provision is instructive. Art. 52 of that Constitution reads:

"Citizen of the USSR are guaranteed freedom of conscience, that is, the right to profess or not to profess any religion, and to conduct religious worship or atheistic propaganda. Incitement of hostility or hatred on religious grounds is prohibited.

In the USSR, the church is separated from the state and the school from the church."

OF COURSE, A BREACH OF THE PUBLIC PEACE, when gods fight or godlessness resists, will be put down by the State's police power. The problem of conversion by Muslims and Christians is often an invitation for violence by Hindus and vice versa. The right guaranteed is '*freely* to profess or practise religion' and conversion thro' bribery and blandishment, promises and coercion, falls short of '*freely*'. Small children, tempted with free English medium schooling and dollar sponsorship or Middle East money in exchange for change of religion, are young victims ignorant of religion and do not *freely* profess. Moreover, public order, in today's tense milieu, will be a casualty if 'conversion' battles break out on communal lines. Regulation of conversion, subject to public order, health and morality, is within the State's province (Art. 25). The Janata Government toyed with legislation on this topic. The Rajiv regime dare not consider it altho' Islamisation in Pakistan and Bangladesh stabs Indian secularism. Gulf money also aggravates communal rivalry if used for conversion of poverty-stricken

* Reason, Romanticism and Revolution —Vol. II Page 298.

Hindus. Even leftist governments are pusillanimous where proselytisation is promoted by foreign funds. The church, in all fairness, should not try this art of exploiting the hunger of the poor of other faiths. Constitutionally, there are enough powers with the State to regulate with care the processes of proselytisation in a country of pathological plurality of divinities. Never should the State take sides with one or other religion. The regularity jurisdiction should not interfere with the right *freely* to profess any religion but may forbid false or phoney temptations for conversion of minor children or needy people. The guiding principle must rest on grounds confined to order, morality and health. Such restriction must apply equally to every religion, with no edge for one over the other gained by money power, mafia terror or superior number.

"The Constitution has failed secularism as Art. 48 is couched in secular phrases but sanctions ban on cow slaughter, a religious sentiment. Kirpan, a weapon, is allowed for Sikhs as a religious practice ! Polygamy is allowed for Moslems and discrimination against women is not yet struck down by the Court all because of religion at the root."

state's power of regulation

THE STATE HAS POWER/DUTY TO PREVENT violation of morality and rules of health in the name of religion like the *devadasi* system or *sati* inhumanity or refusal to take small pox vaccination. If, on an epidemic of plague, shrines are put under total control or, for reasons of good order, religious processions and prayers are severely restricted, Caesar prevails over God. Management of religious places can also be checked, in the name of public order, to prevent criminals and crimes, arms and unlawful assemblies. The Golden Temple becoming a sanctuary for murderers and arsenal of weaponry is a case of the Law committing *hara-kiri*. Misappropriation of religious funds, mismanagement of shrines and allied evils are within the State's power to curb. Sweeping power to regulate or restrict any economic, political or other secular activity, even though closely linked with religious practice, launching social welfare and reform measures, including temple entry for all castes of Hindus, come within the State's police power. Minority religious communities may establish and administer educational institutions, but *this right does not extend to maladministration* and so the State can ansure that such institutions are not exploited or abused by managements in the name of religious minorities. Moreover, the right belongs to the minority community *as such* and not to any man claiming to profess a 'minority' religion. The whole purpose of Article 30 is to benefit the educational needs of the minority community and not to help make money in their name. The State, in the context of multiple misuses by adventurists and pretenders, must clamp down many controls, so that Art. 30 does not become the paradise of 'minority' mafia. The Supreme Court, in the *Kerala Education Bill Case* (AIR 1958 S.C. 956) and *St. Xaviers Case* (AIR 1974 S.C. 1389) in effect pampered the pseudo-minority institutions, altho' later rulings partially undid the lawless exercises of such 'minority' managements.

WHAT IS 'RELIGION' AND what the secular rule of our Republic ? Political opportunists and religious belligerents offer inflated definitions truncating the secular zone or temporal areas dressed up in lofty diction. Tyros, twaddlers and tricksters also contribute to the confusion. Social realists may agree with Dr. Radhakrishnan's ideologically flawed view and political pragmatists may accept its clinical validity as tuned to the Indian ethos. Here are his oft-quoted words:

> "When India is said to be a secular State, it does not mean that we reject reality of an unseen spirit or the relevance of religion to life or that we exalt irreligion. It does not mean that the secularism itself becomes a positive religion or that the State assumes divine prerogatives. Though faith in the Supreme is the basic principle of the Indian tradition, the Indian State will not identify itself with or be controlled by any particular religion. We hold that no one religion should be given preferential status, or unique distinction, that no one religion should be accorded special privileges in national life or international relations for that would be a violation of the basic principles of democracy and contrary to the best interests of religion and government. This view of religious impartiality, of comprehension and forbearance, has a prophetic role to play within the national and international life. No group of citizens shall arrogate to itself rights and privileges which it denies to others. No person should suffer any form of disability or discrimination because of his religion but all alike should be free to share to the fullest degree in the common life. This is the basic principle involved in the separation of Church and State. The religious impartiality of the Indian State is not to be confused with secularism or atheism. Secularism as here defined is in accordance with the ancient religious tradition of India."

THE CONSTITUTION HAS FAILED SECULARISM as Art. 48 is couched in secular phrases but sanctions ban on cow slaughter, a religious sentiment. Kirpan, a weapon, is allowed for Sikhs as a religious practice ! Polygamy is allowed for Moslems and discrimination against women is not yet struck down by the Court all because of religion at the root. Even in the articles regarding minority communities, the Court has read Art. 30 lopsidedly as putting the majority community as less advantaged— certainly, a factor fomentng communal jealousy and destabilisation. Democracy must guarantee to the minority *equal* rights with and immunity from the tyranny of the majority, not more, lest the imbalance produce new pressures of majority communalism.

FOR THE SAKE OF BREVITY, one may move on from the philosophy of secularism and the law of

State neutrality to secular humanism, manifest in the special concern for women and children [vide Art. 15 (3)] and for backward classes [Arts. 15 (4), and 16 (4), 46 and 335] and denunciation of practices often based on religious bigotry like sati and dowry, derogatory of the dignity of women (Art. 51 A). Is there a secular society in India ? There cannot be a secular state without a secular *society.* Secularity is not the enemy of religion but forbids its entry into the temporal affairs of the people. Most religions are totalitarian and do not stop with illumination of Man's relations with his Supreme Creator. They control, with unquestionable authority, dress, food, sleep, art, architecture, song, language, marriage, inheritance, sex, health practice, cure of diseases, and so on. Even privileges of priests and matters of money and property and a hundred other details of secular life are prescribed by cults and orthodoxies, based on dogma, legend and nescience. Why, they challenge Law itself and set up a parallel system of legal atavism, even barbarity. Even now, excommunication, inflicting damage to civil status, goes on among Sikhs, Muslims and other religious groups.

"However, penalty for theocratic societies and the tragedy of godist rivalries is that human progress is stalled, human reason ossified, human minds fossilised by the obdurate obscurantism, infallible fundamentalism and divisive communalism which are violent, wicked, intolerably irrational and disintegratively disastrous."

what the sages say

THE SUBLIME ROLE OF RELIGION and the lofty goals it sets cannot be denied, nor its functional imperatives in matters of social ethic, brotherhood, world peace and the glimpses of spiritual Reality. Schopenhauer's tribute to the Upanishads is sensitive and profound. "They contain the most sublime philosophy and the most satisfying religion. They are the solace of my life and will be the solace of my death". Vivekananda brought religion close to material welfare. Jesus and Mohamed also did. Gandhi did. Moscow allows world conferences of religions because great consequences for the true happiness of humankind flow from such divine discussions. Said Einstein: 'Science without Religion is lame; Religion without Science is blind'. Kindly listen to the cultural quintessence of Indian Religion thro' the voice of Vivekananda:

> "Awake, awake, great souls ! The world is burning in misery". Can you sleep ?"

* * *

> "You do not yet understand India ! We Indians are MAN worshippers, after all ! Our God is man ! ...I would not worship even the Greek gods, for they were separate from humanity ! Only those should be worshipped who are like ourselves, but greater. The difference between the gods and me must be a difference only of degree."

And Tagore sang (in vain though):

> "LEAVE this chanting and singing and telling of beads ! Whom dost thou worship in this lonely dark corner of a temple with doors all shut ? Open thine eyes and see why God is not before thee !
>
> He is there where the tiller is tilling the hard ground and where the path-maker is breaking stones. He is with them in sun and in shower, and his garment is covered with dust. Put off thy holy mantle and even like him come down on the dusty soil !"

HOWEVER, PENALTY FOR THEOCRATIC societies and the tragedy of godist rivalries is that human progress is stalled, human reason ossified, human minds fossilised by the obdurate obscurantism, infallible fundamentalism and divisive communalism which are violent, wicked, intolerably irrational and disintegratively disastrous. Indian society is pathetically, pathologically victimised by sacerdotal pollution of *politics and communal destabilisation of civics*. Even communists are a prey at times to religiose communalism. That Pakistan and Bangladesh, Sri Lanka and Saudi Arabia or, for that matter, many other countries are far worse is no consolation, no alibi. Indeed, we must proudly become the paradigm of secure secularism amidst great religions in happy fellowship.

WHAT, BUT, IS THE UGLY, GORY REALITY on the ground ? Dr. Ghouse, in a perceptive study, observes:

> "Though our Constitution seeks to establish a new polity founded on secularism, communalism and violence pervade our society. Our major religions seek to regulate all human activities, disregarding the difference between the secular and the sacred. The caste and religion-oriented behaviour of the people, the reliance on sectarian loyalties by political parties, and the existence and emergence of communal organisations have slowed down the process of de-communalization of the political process engineered by the substitution of joint for separate electorates.
>
> Our political parties, including the national parties, do not allow secularism to take precedence over their political interests. This is more than evident from the coalitions and understandings concluded between political parties in the last few years.
>
> Our educational institutions do not radiate secularism. Most of the prescribed text-books glorify the good features of one and not all the communities. There are also prescribed text-books which deal with imaginary ancient wrongs suffered by one community at the hands of another, silently calling for revenge. No educational institution has made a determined effort to inculcate in the youth secular ideals."

(Secularism, Society and Law in India, By Mohammed Ghouse).

OUR PARTIES AND THEIR OPERATORS stoop to conquer Power, by hook or crook. That is their

Religion. For others, Mammon is Religion. Bernard Shaw, in Major Barbara, is right. 'I am a Millionaire. That is my religion'. All public life and, of course, private life, is shot with religious radioactivity, fundamentalist fury and communalist malady. Caste-Community-conditioned thought affects social life, official conduct and brain-washes even judicial processes. Allah, Iswara and Yohova are fifth-columnists hell-bent on subtle stratagems to sap secular unity, scientific universality and humanist solidarity.

Some parties are, at heart, communal, others thinly veiled. Yet others are a conspiracy of communalist politicians. Even socialist and communist parties did experiment with communal alliances but have reclaimed their innocence. Elections are so communal and invoke religious support that caste is the largest Party still!

EDUCATION IS COMMUNAL OR UNDER communalist clout. Hospitals likewise. Banks in the private sector act communally. Plantations, industries and newspapers are under communal domination. Church Power and Mullah Power flourish with foreign aid, often for good causes but also for suspect purposes, triggering off Hindu revivalist backlashes. Indeed, Religion is the largest Industry and Investment with the highest political and other returns. Sadhus, clerics and Kazis are Power, and communal riots, with Babri Masjid—Ram Janma Bhoomi syndrome, flaring up in protean forms. The Cross also is not all that innocent and commands superior material resources. Communal metastasis has spread all over the body politic moving towards a relentless crisis. Punjab, with Islamic Pakistan's abetment, is the alarm signal, but who heeds?

THE DYNAMICS OF SECULARISM, the dialectics of communalism and the democracy of religious pluralism must claim the nation's urgent attention. The poor suffer and the mitre seizes the sceptre clandestinely to suppress human rights, divert politics from the problems of hunger and divide the nation to break militant human solidarity. The Khalistan demand, other secessionist-extremist-movements and violent upsurges splitting working classes and peasant struggles, have Religion and its abuse as the driving belt. Says Dr. Ghouse:

"Some of the political parties have a vested interest in communalism and communal violence to gain power, others tolerate it to retain power. Some ride on the crest of communalism; others fear to swim against it. The electorate, stamped in tradition, is responsive to appeals based on caste, religion and language. It has not yet realized the value of the vote.

While communalism and fascism are tightening their hold on the life of the nation, no organised, dedicated and determined effort is being made to loosen that hold and to nourish and strengthen secularism. There are Hindus who identify secularism with Muslim appeasement, and Muslims who dismiss secularism as un-Islamic.

National integration which, in the Indian setting, means dissolving communal-religious divisiveness and defusing blow-ups, is an ineffectual process because the law is left without social invigoration and political will."

THERE IS NEED FOR RADICAL PERESTROIKA regarding the functionalism of Religion. There is urgency in sentencing to death pollutional religionism, the enemy of humanism, from politics, economics and development. There is paramountcy in the desideratum that communal behaviorism shall be extradited from the politicians, Civil Services, legislators and judicial cadres. A national dialogue must start for a common Code for Religions. There are compassionate leaders and creative humanists among India's great religious leaders. They will cooperate with goodwill, given a bona fide start. Currently, India lives in medieval centuries with *Shah Banu* (maintenance of destitute divorcees being challenged in the name of Islam), *Roop Kanwar* (where *sati* is advocated, glorified and verbally opposed by the State) and other like Christian wrongs continue and where human sacrifice still holds sway. Women are reduced to secondary status and denied human rights by invoking religion. A Common Civil Code is fought fiercely in the name of religion. And our ministers at all levels indulge in double-think, double-speak and new-speak when the gut issue is religious obscurantism. For the nonce, I must quote in conclusion an extract from brief judgment—if you are offended, I confess I am the author— where the Indian ethos has come in for judicial censure..

"Ghastly medievalism putridly pervades rural mentality as a harrowing case of human sacrifice, which came as a murder appeal before the Supreme Court evidences. The Court in the Order dated 9.10.73 observed:

"Just one more observation relevant to the (capital) punishment. The poignantly pathological grip of macabre superstitions on some crazy Indian minds in the shape of desire to do human and animal sacrifice, in defiance of the scientific ethos of our cultural heritage and the scientific impact of our technological century, shows up in crimes of primitive horror such as the one we are dealing with now, where a blood-curdling butchery of one's own beloved son was perpetrated, aided by other 'pious' criminals, to propitiate some blood-thirsty deity. Secular India, speaking through the Court, must administer shock therapy to such antisocial 'piety' when the manifestation is in terms of inhuman and criminal violence. When the disease is social, deterrence through court sentence must, perforce, operate through the individual culprit coming up before the court. Social justice has many facets and Judges have a sensitive, secular and civilizing role in suppressing grievous injustice to humanist values by inflicting condign punishment on dangerous deviants. In discharge of this high duty, we refuse special leave in this application against the correct convictions and sentences of the Courts below."

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(Contd. on page 24)

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In search of an orderly life

Vasant Sathe

Ceaseless is man's search for the unknown. In his quest for probing deep into the secrets of nature and in his attempt to have greater control over matter, he discovered two paths: the path of spiritualism and the path of scientific enquiry. Shri Vasant Sathe, a renowned political thinker, has very convincingly argued in the article that follows, the case of spiritualism being co-terminus with the spirit of enquiry. He has aptly added a new dimension to secularism which, in his view, seeks to find the establishment of an orderly life in our heterogeneous society. With the rapid advance of technology, the author points out, the common man has been forced to take refuge in the shell of religious fundamentalism which forbids any questioning and insists on the acceptance of dogmas that are products of years of stagnation. According to the author, secularism is not the negation of religion, rather it is a meeting ground of the common features of different faiths. He believes that behind the symbols of rituals lies the basic need for brotherhood, harmony and happiness.

THE VERY CONCEPT OF SECULARISM HAS had different historical meanings in different countries. The word 'secular' came mainly in relation to the Christian religion and acquired the concept that it deals with matters pertaining to the present world "or in things, spiritual, civil, not ecclesiastical, not concerned with religion" and secularism came to mean the belief that the state, morals, education, etc. should be independent of religion. This development occurred because religion and the church at one stage came to acquire such a dominant position that they started controlling and dominating the political wing of the state itself. With the growth of sciences, technology heralding the era of industrialisation, ideas started changing fast and many a religious belief and dogma came to be challenged. It is, thus, that the concept of secularism in the western world acquired the meaning given above.

the basic premise of beliefs

We have to go to the root of the beliefs of most of the religions if we want to understand the real significance of secularism. In every religion, the first basic premise is the acceptance of the concept of the power behind all creations including the human being, called by various names in different religions and languages like God, Allah, Ishwar, etc. But everywhere His supremacy and His responsibility for the creation as well as for the control over the creation has been accepted and it is a

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condition precedent that this be accepted without questioning.

Having done this as a basic premise, different religions have evolved different codes of conduct attributing their origin to the supreme power and claiming that the same has been handed down by the Supreme Power through either a messenger, as in the case of Islam, or the son, as in the case of Christ and the incarnations like Krishna, Buddha, Shankara, Zoroaster, etc.

Once it was accepted that these incarnations have direct relationship with the Supreme Power, the creator of the entire creation, it was easy to tell the common human beings that their welfare lay in accepting the commandments or the guidance given by these incarnations or messengers of the supreme. It is interesting to note that in the ultimate analysis it is the human urge for security and happiness that makes him accept all prescriptions which enable him to gain this well being. There have been two approaches in this search for happiness: one, the outward or the worldly approach, and the other, the inward or the spiritual approach.

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In both above approaches, the only instrument that human being has been able to use is his intellect. In the outer approach, his main search has been to use matter and his knowledge of material universe which he progressively acquired through sciences, mathematics, technology, etc. for his material well-being to satisfy not only the physical needs but also his mental pleasures, such as, arts, music, literature. But the spiritual search was again on intellectual exercise in trying to ascertain the truth behind his own existence and that of the whole creation and it was mainly through the process of deductive logic gained through his experience in life and his observation about the laws of cause and effect that he came to the conclusion that all universal energy must be one and that the supreme power behind the creation must also be endowed with supreme intelligence.

The highest among those who tried to look inward and through the use of their intellect as well as intuitive power, realised this universal phenomenon of oneness of the supreme which was all-pervasive as was done by the great spiritual thinkers like Buddha and Shankara. Their inevitable conclusion was that when all creation is just but a manifestation in different forms of the Supreme, there should be no need for man to differentiate between himself and not only his fellow beings but even the animal kind as well as everything in the nature. It must be remembered that all spiritual leaders who came to realise this universal and fundamental truth, have uniformly related it to the worldly behaviour of human beings and have preached the philosophy of oneness and thereby emphasised the need for the feeling of love and compassion in human relationship.

In all religions, the founders were those who had realised the spiritual oneness and who tried to use this realisation in the material sphere of man's life by laying down a code of conduct by which a human being would be able to live in harmony with his fellow kind as well as the material world. Knowing that the ordinary man is not in a position to dwell in depth and acquire the knowledge, these great seers and men of realisation felt that if they followed the code of guidance laid down for their well-being without questioning, human beings will gain happiness in the world and if they surrendered totally to the supreme, they will be assured of happiness not only in this life but even beyond. This attitude and guidance was consolidated further by the followers and by the priests who established institutions for each religion like the church or a sect and through these institutions grew rigidity, both of the code as well as the rituals to be followed. Invariably, because of the emphasis on non-questioning grew a sense of fatalism, blind faith, which later on deteriorated into dogmatism, fanaticism and obscurantism.

eclipse of the spirit of enquiry

In the field of religion, once the realisation of the Supreme was accepted through the founders and further questioning banned, there was no question of any further enquiry or either search or research and the only way for the followers was to blindly accept and adhere to the dictates of those religious codes faithfully, strictly and fanatically. It will thus be seen that in all religions a state of stagnation has persisted over hundreds and thousands of years. Religions become ritualistic and rituals close the minds and make believers bigoted. Religion and religious code basically provide an escape and a shelter for human being into the unknown supreme power which is assured to him if he follows the dictate and surrenders into this Power totally. This is like a child running to the mother or father when he feels insecure and threatened, for protection. It is interesting to note that even today men at all levels are seen to resort to and rush for help, protection and fulfilment of their worldly desires to various representatives of the Supreme Power. This takes a variety of forms from the most mundane reliance on the street parrot or a street corner astrologer and palmist to sophisticated crystal gazers and variety of mediums, sooth-sayers, miracle men and women, godmen, god-women as well as deities and powers

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supposed to be in the grave of some saintly person or some shrine of a god at some religious place. The only feature of all these is the supernatural power whose blessings can bring not only mental solace but also physical cure as well as worldly possessions. We find even the so-called educated people resorting to these escapes. This is only the manifestation of man's fear of the unknown which has been with him since the beginning. The basis of this is the fact that he does not have any control either on his birth nor on the time of his death. All religions rely on this fundamental uncertainty of human life and give assurance to man of protecting his interest, both while he is in his human form as well as in the world beyond !

"Religion and religious code basically provide an escape and a shelter for human being into the unknown supreme power which is assured to him if he follows the dictate and surrenders into this Power totally. This is like a child running to the mother or father when he feels insecure and threatened, for protection."

The other route of man's search for truth has been through science, i.e., in the use of his intelligence in relationship with the entire material universe Right from his birth when he comes in contact with the need for his food through the milk of his mother, he has been realising that his survival in the human frame depends on his satisfying the physical needs which can be done by utilising the worldly goods as food, shelter, energy, all of which he can utilise better by the use of his intelligence. The entire growth of civilisation is the story of man's capacity to use his knowledge of the worldly matter to acquire more and more control in using the resources around for satisfying both his physical and mental needs and desires. His enquiring mind has impelled him to go deeper and deeper in search of more and more information and knowledge not only about his own physical and anatomical nature, but his knowledge about the whole process of physical creation, both in terms of biological changes as well as in terms of other engineering, mathematical, chemical processes. The fundamental factor responsible for all this growth has been the emphasis and insistence on enquiry. This is one sphere where man has not stopped questioning and therefore he has kept on growing and evolving more and more into the realm of new horizons. It is altogether a different matter that this worldly knowledge of the matter has either been used or misused by man, but one thing that can be said to his credit is that he has seldom been bigoted, obstinate or fanatical about his knowledge in the field of science and mathematics. He has used this knowledge for his well-being in relation to fellow kind so that he could have an orderly life in the human society which could be conducive not only to his physical well being in the human frame, but could also provide him suitable atmosphere for the fulfilment of his other creative faculties in the fields of art and culture. He wanted an orderly life because he knew and realised that maximum happiness comes to him when he is in harmony, both with nature and with his fellow human beings. It is this search for orderly life, which is the affair and realm of politics, governments and constitutes the entire sphere of *secularism*.

need for a code of harmony

Secularism, thus, deals more with rational sphere of scientific enquiry into man's pursuit of knowledge of the entire creation that he sees around and experiences. Most of man's well-being as well as his sorrow are on account of the fact that he has not yet been able to utilise this knowledge of the material world to fulfil equitably and justly the needs of all members of the human family. This is because he has not been able to acquire harmony. Perhaps scientific search and his understanding of his mind, intellect and psychology could enable him to realise the need for this harmony and understanding. But unfortunately, he felt so engrossed with the acquisition of material power through the pursuit of science and technology that he neglected the mental need of evolving a code of harmony so essential for happiness. Somehow he relegated this to the sphere of spiritualism and religion. Spiritualism which was initially based on ceaseless enquiry and search for the ultimate truth, acquired a stagnant form in the shape of various religions where questioning and enquiry was denied. But religion which basically preached oneness and laid down code of conduct based on love, compassion, good neighbourliness and all other good qualities like harmony, non-killing, non-stealing, etc., which were common code of conduct for stable human society, still continued to govern and dominate human mind.

Today, what we see as a conflict between secularism and religion is the basic conflict, namely, the eternal search of truth by enquiry and questioning as against acceptance of an authority and surrender of one's intellect by giving up questioning and enquiry as most of the religions, religious authorities, as well as political authorities demand.

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Spiritualism even today is above dogmatism and closed mind because it allows constant enquiry and leaves realisation of the Supreme to the individual's pursuit of the search for the eternal truth. In that sense, it is co-terminus with the spirit of scientific knowledge. However, the commom factor between religions and political authority is bigotry and unquestioned acceptance of authority. This is how conflict between political authority and religious authority began and still continues to exist. Both are essentially antagonistic and obstructive to human freedom, growth and evolution of mankind when their authoritarian nature is questioned or challenged.

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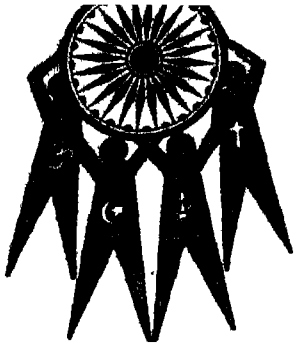
Secularism—need for a movement

S.M.H. Burney

The concept of secularism has not been planted in India from the West, says Shri Burney, a thorough scholar and an experienced administrator. Presently the Chairman of Minorities Commission, he is fully aware of the psyche of the minorities and knows their problems intimately. In this thought-provoking article he puts forward the suggestion that a movement needs to be launched with the active participation of social and cultural organisations which hold the cause of secularism to their heart. He is of the opinion that the propagation of the principles of secularism should not be left to the state alone. He says that masses should be imbued with the spirit of secularism, as it would be absolutely futile if the state professes to be secular while the people living in the country lead the kind of life which is anything but secular. He shares the view with other social thinkers that people living in penury and want are prone to communal influences. Economic backwardness leads to blind belief in irrational rituals and, hence, the problem of the removal of poverty is closely linked with the stabilisation of secularism.

INDIA IS A SECULAR STATE. In order to understand its true secular character it is necessary to know the definition of the concept of secularism and its background. Secularism is derived from a Latin word 'Saeculum' which means, according to C. Williams 'of this age'., 'related to this world'. Its sphere is, therefore, congenial, not sacred or monastic. In the West the concept of secularism implied anti-religious thinking. It had its genesis in the conflict between the Church and the State in the Middle Ages. This friction was intensified after Martin Luther revolted against the Roman Catholicism in 1529. As a result of the growth of the Protestantism, secularism as a modern political system and as a socio-economic ideology became popular in the West. In due course the goal of secularism as a philosophy came to mean the separation of the Church from the State.

peaceful co-existence

The Western concept of secularism implying anti-religious ideology cannot be applied to India which is a multi-religious society. As rightly observed by late Smt. Indira Gandhi, "Secularism is neither a religion nor indifference to religion but equal respect for all religions; not mere tolerance but positive respect—without it, there is no future for the nation." Even Western writers have supported this view, for instance, Harvey Cox has stressed that secularism does not exclude religion; on the contrary, it breeds religious peaceful co-existance. What is important to note is that in a secular polity the state has nothing to do with religion.

It has also to be borne in mind that secularism is not an exotic concept planted in India from the West. It

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grew out of its past history of a wide and general movement in thoughts and feelings which emerges gradually from the intermingling of different groups and communities in consequence of the impetus given to it by changes in social, economic and political life. It has made Indian culture a 'composite' one which means blending of various separate elements into a single whole. The Sufi and Bhakti Movements in Medieval India gave a tremendous impetus to bringing the people of various communities closer. The leading lights of the movement were Khwaja Moinuddin Chishti, Baba Farid, Kabir, Guru Nanak, Dadu, Tukaram and Mira Bai who contributed to the development of composite culture in such a measure that was not really possible only through a political or administrative system. There

"The spirit of tolerance has been a hall mark of secular attitude and outlook, It echoes in Asoka's famous Twelfth Rock Edict on religious Toleration. It triumphed in the reign of Akbar, who being a liberal ruler, was alive to the dangers of religious strife and tried to promote national solidarity by his catholic eclecticism and secular policies."

is much to be read and understood in a cryptic remark of Guru Nanak: 'There is no Hindu and no Musalman', as he saw no distinction between man and man. The spirit of tolerance has been a hall mark of secular attitude and outlook. It echoes in Asoka's famous Twelfth Rock Edict on Religious Toleration. It triumphed in the reign of Akbar who, being a liberal ruler, was alive to the dangers of religious strife and tried to promote national solidarity by his catholic eclecticism and secular policies. His propagation of 'Din-i-Illahi' (Divine Faith) and Sulh-i-Kul (Peace with All) were all imbued with the spirit of secularism. This spirit was strengthened and enriched through our long freedom movement. The Constitution drafted by Pandit Moti Lal Nehru as the Chairman of the historic Nehru Committee in 1928, that eventually became the foundation for the Constitution of India, had a specific provision regarding secularism in these terms:

> "4 (xi) There shall be no state religion for the Commonwealth of India or for any province in the Commonwealth, nor shall the State, either directly or indirectly, endow any religion or give each religion any preference or impose any disability on account of religious beliefs or religious status. (xii) No person attending any school receiving State aid or other public money shall be compelled to attend the religious instruction that may be given in the school. (xiii) No person shall, by reason of his religion, caste, or creed, be prejudiced in any way in regard to public employment, office or power or honour and the exercise of any trade or calling."

fullest possible protection

Our Constitution specifically provides against there being a State religion and assures to every citizen the right to practise his religion and even to propagate it (Article 25). Every religion is assured also of the right to manage its own affairs, establish its own religious as well as educational institutions for imparting religious instruction (Article 26). However, Article 28 prohibits the giving of religious instruction in any educational institution wholly maintained out of state funds. Article 30 permits all minorities, whether based on religion or language, to establish and administer educational institutions of their choice. What is more, the state cannot discriminate in the grant of aid on the ground that the institution is manned by a minority, whether religious or linguistic. The Constitution has thus given the fullest possible protection to all religions flourishing in india.

In a plural society like ours with a multiplicity of religions, creeds and cultures, democracy cannot survive, much less, flourish unless it is based on the principle of secularism. As late Smt. Indira Gandhi put it:

> "Secularism and democracy are the twin pillars of our state, the very foundation of our society."

Having thus established the legitimacy and the need for secularism in India, we have to consider how best it can be sustained and nourished. Unfortunately, there are various distressing developments that pose a threat to secularism. The growing fundamentalism both amongst Hindus and Muslims is a serious threat to the secular character of our polity. One can understand the growth of fundamentalism amongst Muslims because the minorities wish to preserve their identity. But Hindu fundamentalism is a new phenomenon which is fraught with sinister consequences. Concomitant with it is the disconcertingly growing revivalism. Revivalist trends stimulate narrowness in thought and enfeeble

"It is not enough that the State should be secular. The common people have also to be imbued with the same spirit. It would be futile if the State professes to be secular but the people living in the country lead the kind of life which is anything but secular."

the spirit of secularism and also national unity. Pandit Jawaharlal Nehru had warned about the destructive role of revivalism in his letter to Dr. Syed Mahmud":

> "No country or people who are slaves to dogma and the dogmatic mentality can progress, and unhappily our country and people have become extraordinarily dogmatic and little-minded. Generosity of heart is a good thing but what is wanted is not an emotional outburst of generosity but coldly reasoned tolerance. Religion as practised in India has become the old man of the sea for us and it has not only broken our backs but stunted and almost killed all originality of thought and mind. Like Sindbad the Sailor we must get rid of this terrible burden before we can aspire to breathe full or do anything useful"

There are various overt and covert ways through which our secularism is being diluted. Performance of

religious rites in official functions, misuse of media, including official media, for propagation of anti-secular material are all undermining the very foundation of a secular polity. I am firmly of the view that secularism never faced greater danger than at present.

let us organise a movement

We have to mobilise public opinion, educating masses and inculcating in them tolerance and consciousness of our common national heritage and common ideals and values. We have also to ensure that the followers of all religious faiths feel secure and enjoy freedom to profess and practise their religion. However, the important task of promoting a spirit of genuine secularism cannot be accomplished by leaving it to the State alone. It is not enough that the state should be secular. The common people have also to be imbued with the same spirit. [illegible] would be futile if the State professes to be secu[illegible] out the people living in the country lead the kind of life which is anything but secular.

> **"It is also pertinent to emphasise the importance and imperative need for totally delinking politics from religion. No half-hearted measure will do. It is absolutely essential to ban all political parties based on religion without further loss of time.**

A time has come when it would be necessary to organise a country-wide movement involving people from every part of the country, from all walks of life, from urban and rural areas, to create an awareness of secularism and to take all measures necessary for strengthening it. In this mass campaign for secularism it would be necessary to use all the available resources. In addition to the Government machinery, the services of voluntary bodies— social, cultural, economic, academic and professional— should be harnessed in this cause. With their proximity to the grass-roots level, their deep sense of service to the people, their flexible ways of working, they can play a key-role in this regard.

Recognition may be given to those individuals and institutions that make commendable contributions to this cause. It may be considered to institute a National Award for promoting secularism as is done for national integration.

Some high level body should monitor the official and non-official programmes, schemes, directives, administrative measures, policy statements, legislations, publications, performance of media, educational courses and text books, etc. and find out deviations from the policy of secularism and suggest immediate remedial measures and follow them relentlessly. This function could perhaps, in all fairness, be entrusted to the National Integration Council who may constitute a Special Standing Committee to act as a watch-dog in this regard.

In this context it is also pertinent to emphasise the importance and imperative need for totally delinking politics from religion. No half-hearted measures will do. It is absolutely essential to ban all political parties based on religion without further loss of time. This, in my view, it would go a long way towards strengthening secularism.

finding an easy way out

So long as people live in penury and want, they are prone to communal influences. It has often been seen that the people when they are economically backward, tend to lean on irrational habits and rituals to find some relief or an easy way out. In such a situation they turn fatalist which is a symptom of inertia. Gullible by nature, they are easily swayed by catchy slogans and start seeking cathartic relief in communal frenzy. In a multi-religious society where large sections of population, including those belonging to religious minorities, suffer from economic privations, the question of eliminating poverty with a view to promoting the health of society becomes a matter of crucial importance. What is important is to ensure that the minorities get a fair share of the economic cake.

Just a word about our media. It can play a vital role in the promotion of secularism. It can serve as an instrument of social change by mobilising public opinion. Its appeal is direct and massive. All India Radio and Doordarshan have now attained wide reach. They could feature from our history such events which promote communal harmony and secularism. □□□

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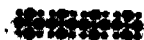
temple, church, mosque and gurudwara potential instrumentalists of national destabilisation. The captains of Power and acrobats of politics are alas, callous artists of fatalism or obstreperous engineers of opportunism. We drift towards .... ? India will be on the cross unless a massive movement of secular swaraj, pushing aside exotic fundamentalists pedling the opium of religionism and communal strategists politicking with crazy godism, refuels the struggle for freedom and retrieves our Democratic Republic from the python process of division, secession and doom. And I am convinced that the Indian masses are invincibly secular and compassionate in fellowship if only we use the principled technology of profound humanism. Truth to tell, there is a quantum jump in communal entropy in Bharat to-day. But given political will and sacerdotal discipline, the Constitution can actualise Operation Secular Salvation. □□□

Education should help strengthen secularism

Prof. N.G. Ranga

The author, a veteran parliamentarian, here highlights the paramount role of teachers, academicians, especially institutions like N.C.E.R.T., in propagating the growing need of the hour for living together in peace, harmony and mutual friendship and abjuring communal rivalries which lead to mutual hatred and destruction. They should teach the students the practical advantages of peaceful co-existence and tolerance which are conducive to progress and happiness of all. He also pleads for publishing purposive textbooks designed to inculcate universal truth about humanism and tolerance. Teachers, he feels, must come forward in the fight against murderous anti-social elements which try to create atmosphere of communal hatred and disruption in society.

THE NATIONAL INTEGRATION COUNCIL HAS repeatedly stressed the need for teaching the history of our country and the world from the standpoint of humanism, inter-communal amity and social progress to promote secularism. Social and economic non-exploitative activities of self-employed individuals, groups and their cooperatives have to be highlighted. H.G. Wells, the British Socialist, led the way soon after the first world war, in writing his "Outline of World History." He extolled the marvellous example set for all the rulers, emperors and conquerors, all over the world, by Asoka the Great in repenting for having indulged in the carnage of Kalinga War and conquest and for courageously declaring his state policy and programme in favour of peace and love of humanity and using his family and imperial powers only for spreading the cult of Buddhism and universal peace and humanism. The educationists all over the world hailed this new turn given to the study of history by Wells and our own Mahatma Gandhi and Jawaharlal Nehru. Yet Hitler, Mussolini and Hirohito's cult of merciless warfare and bloodshed was made fashionable by modern means of propaganda. The world witnessed Hitler's cruel cremations and large scale suppression of teaching and propagation of humanism. Non-violence as envisaged by Buddha, Mahavira, Asoka, Jesus were put on the defensive and the primeval cults of killings are again brought to the fore.

We, in India, have also gone through many epochs of worship at the altars of peace and war, alternating periods of development, destruction, rehabilitation and again destruction under the leadership of our rulers of kingdoms, leaders of castes and communities. The teachings of the Vedas and other scriptures in favour of peace and humanity have been repeatedly hailed or forgotten or decried during our long, tortuous history in the national and regional kingdoms and communal and

economic regions. Our nationalism, as envisaged and preached over the ages has not prevented the parcelling of our country into destructive divisions and their rivalries, the latest being the Partition of 1946-47. Fortunately we continue to cherish our cultural and scriptural loyalty to the conception of Bharat Varsha and heavenly invocation and attachment to the inspiring exhortation to march towards "**Sarve Jana Sukhino Bhavantu**".

what teachers need doing

So our teachers have to begin to make a concerted effort to mould the minds of the rising generations of school children in the direction of humanism and love of ife and spiritual atmosphere in the light of vedic nvocation of **Lokaa Samastaa Sukhino Bhavantu** :alculated to uplift humanity, eliminate or minimise ieedless suffering and abjure exploitation of class by :lass,etc.

"We have to evoke the adherence and enthusiasm of children to the practical and progressive aspects of the contributions made by science and human valour and spirit of self-sacrifice towards the advancement of civilisation into the realisation of the value of life and more especially of the human beings."

We have to evoke the adherence and enthusiasm of :hildren to the practical and progressive aspects of the :ontributions made by science and human valour and ;pirit of self-sacrifice towards the advancement of :ivilisation into the realisation of the value of life and nore specially of the human beings. It is the sacred duty of teachers to help children, to realise how the various iuclear weapons, such as I.C.B Ms, missiles and nodern adventures into destructive realms of Star Vars etc. are beastly and ungodly. To learn to create is nore adventurous and heroic than to kill or silence ne's adversaries. They have to highlight the growing ieed of the world, nation, of all communities, and of ieople of all cults and religions, nationals, tribal and aste groups for living together in peace and mutual riendship and abjure rivalries which lead to mutual iatred and destruction.

We have to impress upon their impressionable minds nd delicate sentiments the ever-rising felt needs of the orld for peace. We have to tell them, through the ttractive stories, inspiring poems and ballads, written y such bards like Valmiki, Homer, Tagore, an npressive account of the positive and creative aspects f science and scientists like Einstein, Pasteur, agdish Bose, how the whole of history from the mes of Ramayana, Mahabharata to Mahatma Gandhi, as led the present day leaders of the Super Powers nd their adherents to reach agreements towards Vorld Peace. The Six-Nation's appeal, the Delhi eclaration between Rajiv and Gorbachev, the ieneva Pact between Reagan and Gorbachev, i.e., I.P.T. and the work of NAM are all a confession of the futility and cruelty of warfare between nations and continents. The prolonged painful rivalry between militarists in misusing science have only demonstrated their utter inescapability to insure their peoples from fear of war. Peace and humanism, as envisaged by Buddha, Mahavira and as practised by Asoka and Gandhi, continue to inspire humanity to live in hope. Tribes or nations, communities or religious fraternities are to feel proud only of their saints. Let their leaders remember and cherish their own particular exemplars for their love of humanism and peaceful progress. It is, therefore, the great mission of the NCERT and our growing ranks of teachers in professional and non-professional temples of knowledge and teaching to study and teach history from the angle of our vedic invocations, the blessings of God for the progress of all humans and living beings. Let them teach the present-day students about the practical advantages of peace and merciful approach towards each other. Let them stress the need of human beings to live for and love humanity as such and to develop disciplined ways of life, conducive to progress and happiness of all through the conscious efforts of all.

India is more in need of such approach and such teaching because of its inescapable heritage of the presence and active and virile activity, within its bosom, all varieties of peoples of all stages of historical backgrounds and cultural more. Delay in coming to grips with these multi-sided social heritages only complicates the challenges to our continental nation. Especially is it so ugent, in view of the ever intensifying violent forces and appeals towards mutual strife and provocations Appeals to display heroism and self-sacrifice being made to excite their regional and communal zeal by local or tribal or communal leaders to degrade them into bestiality and cruel destructions. The modern means of communication and propagation, like the Radio, T.V. and social platforms and parties and places of worship have to be utilised in a progressive manner by teachers. If they fail in this direction, others in the service of Demon and Devil would undo all the good work of all our schools and teachers, preachers and prophets, like Buddha and Gandhi.

"They (teachers) have to highlight the growing need of the world, nation, of all communities, and of people of all cults and religious, national, tribal and caste groups for living together in peace and mutual friendship and abjure rivalries which lead to mutual hatred and destruction."

what NCERT should do

N.C.E.R.T. should produce and distribute, on priority basis books in all Indian languages on all such social subjects as are calculated to help young children to read, memorise and recite in simple, elementary metres of music, aphorisms, poems, sayings and songs, calculated to inculcate the universal truths regarding Humanism. Just as we have the famous Bhatruhari in

Sanskrit and Vemana, Sumati Satakams in Telugu, we have to reproduce in some convenient volumes, good books containing relevant portions of such sayings and preachings without any particular religious soloism and exclusive thoughts or import. We should popularise all such books, their contents, among our school children.

and what books be provided

Such books have to be graded according to their literary and moral import, to suit the standards of study in elementary and middle-schools. The knowledge of their contents has to be treated as one of the basic items of learning to be taught in schools. It will be best if their poems and songs are so musically worded and phrased as to help children to easily memorise, muse and sing in as voluntary and effortless manner as possible. If every child, irrespective of its home, religious enviromment, is trained in this type of lore knowledge and educational atmosphere, without in any way exciting the religious or family faiths, we would have laid the cultural trepan which would easily place the children of one religious group on the ever-widening universal stream of India, and help the children hailing from all religious homes to feel and appreciate the expanding cosmopolitan highway of social and cultural life, of people of all religions, regional and historical, tribal and political backgrounds and environments

"Let them (teachers) stress the need of human beings to live for and love humanity as such and to develop disciplined ways of life, conducive to progress and happiness of all through the conscious efforts of all."

overcome these hurdles

Differing and sentimentally painful dietary habits and fancies are also coming in the way of children getting together in harmonious and mutually congenial and comradely atmospheres. It is the function of teachers and organisers of public socials to help school children to overcome all such divisive habits. The Moslem and Christian parents and children have to be made aware of prevalence of conveniality and harmonious social relations among the pure vegetarian Brahmin and non-vegetarian Non-Brahmins and such differing dietary habits among vegetarian and non-vegetarian have nothing to do either with the vigour, valour, display of good cheer and happy congeniality of people in their mutual social activities. So, both the non-vegetarian and pure vegetarians should shed their mutual prejudices and join together during afternoon parties, without any presence or indulgence in non-vegetarian dishes and intoxicating drinks. During all such fetes, every effort has to be made by teachers, parents, and students and youth organisations to help children develop friendship.There shall be no competitive games or recitals or theatricals which bring to the fore their domestic,social peculiarities or divisive atmospheres. Every effort has to be made to applaud every display of friendship, mutual appreciation and love. Thus the growth of mutual friendship and understanding has to be welcomed, sustained and watered with elders,appreciation and admiration. It is well for all democrats and cosmpolitan patriots to be ever ready to scotch every new move to rouse old animosities or to exaggerate some or the other historical but painful happenings, in which someone or the other, caste or community, denomination of anyone of the religions prevailing in any area is sought to be undermined. Once any such happening or historically evocative recitation or Bhajan or theatrical display takes place in any area, and evokes unhealthy or disruptive feelings or passions, lovers of patriotic unity and devotees of communal amity should bestir themselves to scotch all such disruptive or passion-rousing evocations by suitable social developments of harmonious feelings.

how to live harmoniously

After all this is an ancient land with communities or castes with hoary traditions. During their millenniums-long career, they have had to join or differ from or coalesce or been forced to mix with ever so many human groups and go on growing into as not so-separate social groups. So, these anthropological,historical and patriotic and evolutionary strains in their matrix have to be continually stressed and brought to the notice of at least the elders, leaders and teachers of the respective groups by their educationists and social organisers. Our educational personnel and political leaders and all nationalists have to be continually on the look-out to help more and more people and parents to stress the need of more and more groups of people, ever so many points of commonality and thus broaden and deepen knowledge and feelings of mutual unity and understanding. All those secular forces in all communities should be ever-ready to mobilise their constructive and socially harmonising forces, from schools to public platforms, from social gatherings to religious congregations,to play their socially protective and harmonising role just like the fire-fighting brigades. They have to hasten to awake and energise educationists and nationalists to rush into the fray, bring down the tempo of passion-ridden atmosphere to the level of debate and help people to search and find out reasonable way of dissolving passions and reaching some humane way of living together in mutual harmony and resume their capacity and habit of smiling at and trusting each other.

"The modern means of communication and propagation, like the Radio, T.V. and social platforms and parties and places of worship have to be utilised in a progressive manner by teachers. If they fail in this direction, others in the service of Demon and Devil would undo all the good work of all our schools and teachers, preachers and prophets, like Buddha and Gandhi."

fight anti-social elements

After all the Hindus too buried many a Buddhist stupa and Shaivites and Vaishnavites converted the temples from Vishnu to Shiva and vice versa. The recent disruptive and painfully powerful

agitation over Ram Janma Bhoomi, its cruel reaction in the bloddy riots in Kashmir and other places, have demonstrated the growing need for all nationalists of all castes and communities to be ever vigilant about such disasrous eruptions. We cannot take for granted that our people can all be insured against such disruptive exhibition of their hatred and murderous primeval passions. Let us remember that these are ever active forces. Preachers, teachers and political leaders have to fight such murderous anti-social forces which are ever on the look out to awaken or excite some disadvantaged or ambitious or other antisocial elements and rouse them to behave in a dehumanised manner against the peaceloving masses, on the pretext of their rivals in other communities playing with similar beastly elements.

"N.C.E.R.T. should produce and distribute, on priority basis, books in all Indian languages on all such social subjects as are calculated to help young children to read, memorise and recite in simple, elementary meters of music, aphorism, poems, sayings and songs, to inculcate the universal truths regarding Humanism."

Such transformations have gone on over centuries not only as between Hindus and Buddhists, Hindus and Moslems and Christians but also, between Hindus themselves, as for instance, the Shaivites of Basaveswara. Vaishnavites of Ramanuja and so on. This process wholesome at certain times and in some places, reactionary in other areas— has been going on.

proper education, a must

We have to educate our public men functioning in all representative institutions, like Panchayats, cooperatives, religious bodies about all such historical developments and Charter of Human Rights adumbrated by Eleanour-Roosevelt and United Nations. It is a slow, arduous and ever continuous educational activity to be carried on through schools and social and political channels. We can neglect this never-ending duty at the peril of our national disintegation. It is the primary, ever vigilant duty and activity of every genuine believer in secularism. It is the fundamental basis for all teaching.

co-existence, need of hour

Our history has also been witness to their learning to live together, allowing their mutual freedom to worship whichever manifestation of God's aspects they preferred to extol. Similarly, many a painful thing must have happened, during the course of this millennium when the Moslem-converts of the military forces rushed into India through the North-West Frontier from Afghanistan right upto Turkey and Greece, if not Russia and Mongolia. European Christians also reached our coasts. They perpetrated many social upsets and political horrors. All of them used their weapons of religion and race, in addition to their superior skills in warfare and governance to gain ever-expanding role in our national panaroma. Large chunks of our own suppressed Harijans, caste-wise disadvantaged masses, were invited by the invaders to share in their political spoils and new social cosmopolitanism. Thus so many revolutions and compromises continued to take place.

We have to persuade our people and educate our children that it would be foolish and reactionary, if not suicidal, for any community to morbidly encourage schemes of vengeance or repair social wrongs of undoing many such unhappy or painful historic events. Indeed, many a historical misbehaviour of some one community or its leaders ought not to be considered as a charge against their present day successors for no fault of their own. The present day national needs of our society as a whole, heavy as they are, ought not to be further burdened by futile efforts to right the wrongs perepetrated by their so-called forefathers when the cooperation and comradeship of all communities are so badly needed in the present day efforts to promote national unity and liberate people from their social and economic poverty.

teach to shed hostility

Several Organisation among Hindus, Moslems and Christians know fully well how children can come to be influenced and led into lasting habits and impressions, especially in harmony with and extension of their home atmosphere of inward looking with faith and affection at what their parents imprint on their talks, thoughts and fears and prejudices about or against other children of different dresses, accents of speech, turns of sayings and proverbs. Hostile attitudes have to be dissolved by patriotic organisations, social and political. The Scout and Girl Guide Movement do a lot of good work in engendering positive approaches of friendship and companionship. This is not enough.

and write purposive books

The schools and teachers will have to play so much more positive role. They can do so with the aid of purposive text-books, personal preachings and organising socials, etc. They can make more constructive contribu-

"Every effort has to be made to applaud every display of friendship, mutual appreciation and love. Thus the growth of mutual friendship and understanding has to be welcomed, sustained and watered with elders' appreciation and admiration."

tion by invoking the aid of parents and the leaders of all communities and political organisations, who are agreeable to strengthening the consensus, agreed upon by themselves locally and through their national leaders on the platforms and during the periodical campaigns of National Integration. Teachers and local advisers of schools and Panchayat and Municipal leaders (official and non-official) who distinguish themselves by their sincere, eloquent and persistent support for development of secular *camaraderie* have to be specially honoured and spectacularly held up as exemplars before students. The influence of this type of approach and the exhibition of this achievement of devoted secularism of local and national leadership cannot be exaggerated.

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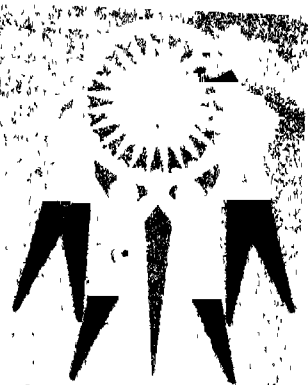

Preserving secularism in India

V.M. Tarkunde

Tracing the origin of the meaning of the word 'secularism' as understood in India, the author asks: Who is secular ? According to him, a secular person 'must rely on his own reason and be free from blind faith and religious orthodoxy'. Lamenting over the fact that majority of the people continue to be dominated by blind faith and religious mode of thought, the author says, 'there is no cause for pessimism or despair'. Because India is the only big country which has retained its democratic political structure throughout the post-war period despite multiplicity of its religions and languages and regional sub-cultures. What is needed now is a sort of cultural renaissance having a direct bearing on the economic and social problems of the vast majority. And this will be possible, according to the author, only if the social activists at the grassroots level work in a spirit of equality and fraternity without any thought of political gains

THERE ARE AT LEAST TWO SENSES in which the word secularism is used. In one sense, secularism connotes a philosophy and a mental orientation which holds that no supernatural power interferes with the affairs of the world, that there is nothing which can be regarded as other-worldly. This postulate leads to the view that, there being no predestination, the human individual has the capacity to make his future by recourse to his own reason. Secularism in this sense is indistinguishable from atheistic humanism.

historical background

The other sense of secularism is perhaps the more popular one. It has the background of a long historical development. From about the 12th Century A Europe went through the Renaissance Movement wl spanned several centuries. It was a movement aga the domination of the Christian church and the prie class. It was essentially a humanist movement wl progressively secularised European society. encouraging a this-worldly view of life, it opened way for the growth of science. By blasting the theo the divine right of kings, it laid the foundation of mo liberal democracy. It paved the way for the Reformı and a long struggle between the secular power o State and the spiritual power of the Church. Ther eventually an uneasy truce between the State an Church and the result was the concept of the 'se State.'

Secularism in the second sense assumes a dichotomy in human life between the sacred and the secular. Religion is confined to the sacred aspect of human life while the secular aspect is taken care of by other institutions, principally the State.

The demarcation between the two aspects of human life is by no means precise. Beliefs and dogmas in regard to the supernatural and the rituals connected with these beliefs and dogmas constitute the religious sphere of life. The rest of the human life is regarded as secular. It includes political and economic activity, civil and criminal law, social institutions like marriage and family, and social services like education and health.

"Secularism and democracy represent a system of values, and a secular democratic constitution can function successfully in a country only when a substantial section of the people of that country cherish those values."

There is a good deal of ambiguity on whether morality falls within the region of the sacred or the secular. This ambiguity does not cause much confusion in practice, because the function of the State is to make laws and enforce them and not to promote morality as such. Law is distinct from morality though it has moral background. Law is essentially coercive while morality must be voluntary.

secularism of the west

The States in western democracies are not uniformly secular. Comparatively the clearest instance of a secular State is found in the U S A. Democracies in Europe are secular in different degrees. A common feature of all the Western democracies, however, is that there the emergence of secular States was preceded by a long process of secularisation of the respective societies.

and of India

Due to a historical accident, this process was reversed in India. As a result of the defeat of international fascism in the Second World War, India acquired national independence much before the Indian society was adequately democratised and secularised. Leading members of the Constituent Assembly who had a decisive voice in devising the Indian constitution, men like Jawaharlal Nehru and Dr. B.R. Ambedkar, were modern minded individuals inspired by the ideals of a secular democracy. By picking up the best features of the constitutions of advanced countries, they prepared for India a constitution of a secular democracy. But neither secularism nor democracy can be realised merely by the promulgation of a constitution which embodies those ideals. Secularism and democracy represent a system of values, and a secular democratic constitution can function successfully in a country only when a substantial section of the people of that country cherish these values. The success of a secular democratic State requires the existence of a secular democratic society.

secularism & democracy

It should be noticed that secularism and democracy have the same cultural roots. Liberty, equality and fraternity are the recognised values of democracy. Liberty or freedom can be appreciated only by a person who has a free mind. He must be a self-reliant individual. He must rely on his own reason and be free from blind faith and religious orthodoxy. In order to cherish the values of equality and fraternity, his moral approach must be free from the influence of caste, creed or community. Only a secular individual can be a democrat and only a democrat can be genuinely secular. It is true that some dictatorial States are apparently secular, but that is only an appearance. In those States the ideology of the ruling coterie takes the place of religious orthodoxy.

India continues to have a hierarchical social structure. The majority of the people continue to be dominated by blind faith and the religious mode of thought. These are signs of a gradual change for the better, but the change is still quite inadequate. That is why in India democracy is weak and wobbly and why secularism is largely chimerical.

constituent assembly's job

It must be said that in the given situation, members of the Constituent Assembly turned out a splendid job. Like pre-Renaissance medieval Christianity, both Hindu and Muslim religions pervaded the entire life of the individual from the cradle to the grave. There was no sphere in the life of a Hindu or a Muslim which could be regarded as wholly secular. The Constituent Assembly had therefore to make a number of compromises while embodying the principles of secularism in the Indian Constitution. While granting freedom to all persons to profess, practice and propagate their religion, it saved the power of the State to make laws "providing for social welfare and reform." This was obviously necessary for the future secularisation of Indian society.

"While freedom to practise and propagate religion and non-discrimination between different religions are essential features of a secular State, another equally essential feature is that the State shall do nothing to promote any religion."

Further, the Constitution declared that untouchability was abolished; it also provided that laws could be made for throwing open Hindu religious institutions of a public character to all classes and sections of Hindus. Another compromise with the principle of secular State took place when the constitution allowed reservations to be made in educational institutions and public services in favour of the Scheduled Castes, Scheduled Tribes and Backward Classes. By another compromise, recognition was given to the right of all minorities to establish and manage educational institutions of their choice. Some of these provisions may have to be revised in the light of future experience. Despite these compromises, however, the Indian Constitution is

essentially secular because it provides freedom of religion (both individual and corporate), non-discrimination between different religions, and non-intervention of the State in religious affairs except to the extent specified in the Constitution. It is worthy of note that the Constitution, as it emerged from the Constituent Assembly, generally satisfied all the minorities in the country.

opinions differ !

There is a difference of opinion in India in regard to the meaning of even the limited concept of a secular State. Dr. S. Radhakrishnan observed that a secular State is one which gives "equal status for all religions." A more positive formulation of the same view is that a State which shows equal respect for, and gives equal support to, all religions is a secular State. Such an interpretation, however, is clearly untenable. It would justify the absurd view that a state which made equal financial grants in favour of all religions is a secular State. While freedom to practise and propagate religion and non-discrimination between different religions are essential features of a secular State, another equally essential feature is that the State shall do nothing to promote any religion The American Constitution clearly lays down that principle. It is also consistent with the relevant provisions of the Indian Constitution.

"Because of the lack of correspondence between the secular values embodied in the constitution and the religious orthodoxy prevailing in the bulk of the Indian people, there is a widening gap in the secularist professions of the Indian State and its actual practice. Official lapses from secularism are numerous."

"It is now beyond controversy that the problems of mass poverty and social degradation cannot be solved unless the deprived sections of society, who constitute the bulk of the population, take the initiative to solve them in a spirit of self-reliance and mutual cooperation. Self-reliance involves the values of freedom and rationalism and rejection of blind faith and fatalism. Mutual cooperation for economic and social progress involves the values of equality and fraternity and rejection of communal and casteist bias."

official lapses

Because of the lack of correspondence between the secular values embodied in the Constitution and the religious orthodoxy prevailing in the bulk of the Indian people, there is a widening gap in the secularist professions of the Indian State and its actual practice Official lapses from secularism are numerous. Text. books prescribed in schools have a pronounced religious bias, though an attempt is made, often unsuccessfully, to give equal importance to all religions. Many State functions are accompanied by religious ceremonies, mostly of Hindu vintage. Visits of political dignitaries to places of religious worship are widely advertised. The State-owned radio and television often engage themselves in programmes which are calculated to foster the religiosity of the people. This tendency is on the increase.

In recent years, there has been a noticeable degeneration in the functioning of both democracy and secularism in India. There is a noticeable fall in the standards of all democratic institutions including the President and Governors, the Central and State legislatures, the Central and State ministries, the bureaucracy, the judiciary and the law enforcement machinery. There is also a fall in secular standards, with increasing communal violence and the patently partial behaviour of the security forces during communal riots, as also the inability of the State to cope with cases of communal tension such as the Ram Janmabhumi-Babri Masjid controversy. This fall in democratic and secular standards is probably attributable to the fall in the quality and calibre of India's political leadership. As observed earlier, the political leadership which was available to the country at the time of national independence had emerged from the freedom struggle and was inspired by a high degree of idealism. With the passage of time, those leaders have passed away and are gradually replaced by leaders whose value system is approximately at the same level as the value system of the bulk of the people. After all, political leaders in a democracy represent the people, and it is not surprising if, after the disappearance of the idealistic and self-sacrificing leadership of the freedom struggle, the political leaders of today have come to represent the relative cultural backwardness of the bulk of our people.

"Out of all Third World countries in Asia, Africa and South America, India is the only big country which has retained its democratic political structure throughout the post-war period. This India has done in spite of tremendous handicaps arising from its multiplicity of religions, languages and regional sub-cultures."

"Experience has shown that the cultural renaissance which the country requries will not be brought about by political parties. Political parties, on the contrary, tend consciously or unconsciously to exploit the communalism, casteism and religious orthodoxy prevailing among the people. Renaissance in India will be brought about by social activists who work at the grassroots level in a spirit of equality and fraternity and without any thought of political gain."

why pessimism ?

There is, however, no cause for pessimism or despair. Some positive features in the Indian situation should also be noticed. Out of all the Third World countries in Asia, Africa and South America, India is the only big

country which has retained its democratic political structure throughout the post-war period. This India has done in spite of tremendous handicaps arising from its multiplicity of religions, languages and regional subcultures. This shows that Inida's cultural backwardness, as compared to the requirements of a secular democratic State, is only relative. It should be possible to fill up the gap by generating an appropriate cultural renaissance in the country.

need for cultural renaissance

The cultural renaissance which India requires must not, like European renaissance, be confined to the elite sections of society. It must spread among the pebple at the grassroots level if it is to provide the cultural subsoil of a modern secular democracy reared on adult franchise. In order to be a mass movement, Indian renaissance must have a direct bearing on the economic and social problems of the vast majority of the Indian people. The connection between the two is indeed obvious. It is now beyond controversy that the problems of mass poverty and social degradation cannot be solved unless the deprived sections of society, who constitute the bulk of the population, take the initiative to solve them in a spirit of self-reliance and mutual cooperation. Self-reliance involves the values of freedom and rationalism and rejection of blind faith and fatalism. Mutual cooperation for economic and social progress involves the values ot equality and fraternity and rejection of communal and casteist bias. The Indian renaissance movement will be a mass movement when the people realise that they must take their fate in their own hands if they are ever to overcome their economic and social backwardness.

"The remedy against communalism is to develop individuals who are freedom-loving, self-reliant and morally conscientious. Such persons do not merge into and identify themselvs with, any collectivity. They donot "belong" to any group because they belong to themselves."

Experience has shown that the cultural renaissance which the country requires will not be brought about by political parties. Political parties, on the contrary, tend consciously or unconsciously to exploit the communalism, casteism and religious orthodoxy prevailing among the people. Renaissance in India will be brought about by social activists who work at the grassroots level in a spirit of equality and fraternity and without any thought of political gain. There are already quite a few such grassroot-activists in the country. Let their tribe multiply.

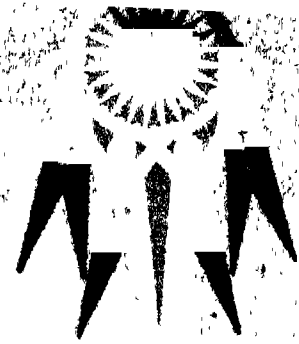
nationalism, an answer ?

It is generally assumed that nationalism is the solvent of communalism, that you should promote nationalism in order to combat communalism. It is on this assumption that movement for "national integration" is sought to be developed as an antidote to communalism. The assumption, however, is utterly baseless. Like communalism, nationalism is also a form of collectivism. In a collectivity, individuals submerge their individuality by identifying themselves with the collectivity and then develop aggressive attitudes towards other similar collectivities. As Dr. Erric Fromme pointed out years ago, "submission inside and aggression outside" are the characteristics of all collectivities, whether based on religion, nation or ethnicity. The falsity of the assumption that nationalism is the solvent of communalism can be shown by pointing out that many Hindu chauvinists are fervent nationalists. As Hindus are in a clear majority in India, their communalism does not conflict with nationalism. That is why the most aggressive nationalists are found among members of the RSS and the Shiv Sena.

the remedy

The remedy against communalism is to develop individuals who are freedom-loving, self-reliant and morally conscientious. Such persons do not merge into, and identify themselves with, any collectivity. They do not "belong" to any group because they belong to themselves. They can be correctly described as cosmopolitan humanists. Cooperation of such free individuals on the basis of equality and fraternity for solving their economic and social problems will reduce and eventually eliminate the evils of communalism, casteism and narrow nationalism.

"What India requires is the spread of the humanist values of freedom, rationalism and self-sustained morality among all sections of the people. This does not necessarily involve the propagation of atheism. There are many persons who believe in God or in an impersonal supernatural entity but who do not regard themselves as belonging to any particular religion and are therefore free from communalism. They can be called religious humanists. All humanists, whether atheistic or religious, should cooperate in the task of strengthening the roots of a secular democracy in India."

Humanism constitutes the philosophical foundation of secular democracy. What India requires is the spread of the humanist values of freedom, rationalism and self-sustained morality, among all sections of the people. This does not necessarily involve the propagation of atheism. There are many persons who believe in God or in an impersonal supernatural entity but who do not regard themselves as belonging to any particular religion and are therefore free from communalism. They can be called religious humanists. All humanists, whether atheistic or religious, should cooperate in the task of strengthening the roots of secular democracy in India. □□□

It's a must for unity and integrity

B.N. Pande

Secularism, the author feels, has to play a decisive role at the present stage of Indian democracy. Because, according to him, 'today when the Indian democracy seems to face the challenge of narrow divisive trends and tendencies, a rational and scientific approach which is the basis of secularism has become a matter of utmost importance. Communal disturbances which have disfigured the public life in the recent past, as well as the birth of narrow and divisive trends and of obscurantist theories are mainly the result of ignorance; and ignorance can be fought not by legislation alone, nor by a negative fiat alone, but by education, and in the process of educating the traditional Indian mind, secularism and all that it stands for have to play a major role.' The author cautions that 'if we were to abandon the principles of secularism, it would result in social and political disintegration on a scale which will make it impossible for us to live as citizens of a free, self-respective, progressive or prosperous nation.'

MAHATMA GANDHI, THE FATHER OF THE Nation, was a great believer in communal harmony, national integration and secularism as **Sarva Dharma Samabhava,** i.e., equal respect for all religions. In 1946, when communal strife became very acute, he declared:

"All those who are born in this country and claim her as their Motherland, whether they be Hindu, Muslim, Parsi, Christian, Jain or Sikh are equally her children and are, therefore, brothers united together with a bond stronger than that of blood."

After India adopted her Constitution, it has always been claimed that the Republic of India is a secular, welfare, and a democratic State. In this description of Indian democracy the three descriptive words are 'secular', 'welfare' and 'democratic'. Generally, the significance of the descriptive words 'welfare' and 'democratic' is fairly well understood. But the significance of 'secular' is not. What does then secularism mean?

negative meaning

The dictionary defines 'secularism' as a doctrine which should be based solely on the well-being of mankind in the present life, to the exclusion of all considerations drawn from belief in God or in a future State. The movement of secularism, which began in Western Europe in the nineteenth century, was basically anti-God and anti-religion. Its motive force was a keen desire to break away from religion.

INDIA : A CONFLUENCE OF CREEDS

India's positive approach

It is necessary to emphasise that Indian secularism does not fall in this negative category. Indeed, Indian secularism recognises both the relevance and validity of religion in human life. That is why Article 25 and 26 of the Constitution expressly safeguard the freedom of conscience and free profession, practice and propagation of religion as well as freedom to manage religious affairs. It is true that the word 'secular' did not first occur either in Article 25 or 26, or in any other Article of preamble of the Constitution.

By the Constitution (Forty-second Amendment) Act, 1976, the preamble was amended. For the words "Sovereign Democratic Republic" the words "Sovereign, socialist, secular, democratic Republic" were substituted For the words "Unity the Nation" the words "Unity and integrity of the Nation" were substituted.

"The law protects the right of sanctuary in the sense that apostasy is not recognized much less penalized as a legal offence, any more than is having no religion at all. In these ways the state upholds moral and religious liberty. Liberty of conscience is limited, by reference to the common interest in public order"

secular state

According to Jagdish Swarup, the former Solicitor General of India: 'The State must confine itself to secular objectives and neither advance nor impede religious activity...The great bulk of human affairs and human interests is left by any free government to individual enterprise and individual action. Religion is eminently one of those interests, lying outside the true and legitimate province of government.

Our Constitution has adopted a system of political philosophy that rejects all forms of religious faith and worship and has accepted the view that public education and other matters of public policy should be conducted without the introduction of religious elements. The word "Secular" means that the government is neutral and while protecting all religions it prefers none and dislikes none.

Our Constitution is wedded to the principle that the State should refrain either penalizing or favouring any religion that is professed by any of its people. What is guaranteed by the free exercise clause in the American Constitution is guaranteed by our Constitution in Articles 25 to 28. Justice as fairness provides, strong arguments for an equal liberty of conscience.

freedom of thought

Freedom of thought and belief, and of religious practice, may be regulated by the State's interest in public order and security. The state can favour no particular religion and no penalties or disabilities may be attached to any religious affiliation or lack thereof. The notion of a confessional State is rejected, by the Constitution. Instead, particular associations may be freely organized as their members wish, and they may have their own internal life and discipline subject to the restriction that their members have a real choice of whether to continue their affiliation. The law protects the right of sanctuary in the sense that apostasy is not recognized much less penalized as a legal offence, any more than is having no religion at all. In these ways the state upholds moral and religious liberty. Liberty of conscience is limited, by reference to the common interest in public order and security.

equal protection

In the context of the Constitution secularism means that all religions practised in India are entitled to equal freedom and protection. It stipulates that no one religion can claim to be the monopolist of spiritual wisdom and that the universality of spiritual values can be attained in a variety of ways. This basic philosophy of Indian secularism is consistent with the age old Indian belief that truth is one; but it has many facets and so wise men describe truth differently.

Having recognised the relevance and validity of religion in human life, and having guaranteed equal status and protection to all religions, Articles 25 and 26 make it abundantly clear that all religions must function within their legitimate domain and that freedom of religion guaranteed to all citizens is subject to public order, morality, health, and the provisions of the Constitution relating to Fundamental Rights. This is a very significant provision It means that citizenship is secular in civil matter and so are the Fundamental Rights guaranteed to citizens and fundamental obligations imposed on them by the fact of their citizenship. That is another aspect of Indian secularism.

"Having regard to the fact that the Indian Republic is a multi-religious, multi-racial country, it may be said without any exaggeration that the doctrine of secularism is of the utmost fundamental significance to the success of the democratic way of life adopted by India."

Indian secularism, progressive

Indian secularism is not a negative or a passive concept; it is not even a merely political concept. It is a social concept of wide application, revolutionary and progressive in character and dynamic in its operation. It does not accept the position that India as a State has any state religion; and it does not allow any religion to trespass in the discussion or decision of secular matters. It recognises only one class of citizenship in this country and confers on all citizens the same fundamental rights and, by necessary implication, imposes on them the same fundamental obligations. Having regard to the fact that the Indian Republic is a multi-religious, multi-racial country, it may be said without any exaggeration that the doctrine of

secularism is of the utmost fundamental significance to the success of the democratic way of life adopted by India.

Take the case of the personal law of the Hindus. When the Hindu Code was introduced in the Indian Parliament, many traditional Hindus believed that the enactment of the Code would amount to the invasion of Hindu religion. Jawaharlal Nehru firmly stood by the Hindu Code and made it clear that personal law is a purely secular matter in which religion has no relevance. The enactment of the Hindu Code was thus a significant triumph of Indian secularism.

"Article 17 of the Constitution is another shining illustration of the principle of Indian secularism. This article provides that untouchability is abolished and its practice in any form is forbidden and it adds that the enforcement of any disability arising out of untouchability shall be an offence punishable in accordance with law."

Article 17 of the Constitution is another shining illustration of the principle of Indian secularism. This article provides that untouchability is abolished and its practice in any form is forbidden and it adds that the enforcement of any disability arising out untouchability shall be an offence punishable in accordance with law. *This mandatory provision illustrates that untouchability* can no longer be practised, notwithstanding some obscure or obsolete Hindu texts to the contrary.

Likewise, when Article 44 provides that the State shall endeavour to secure for the citizens a common civil code throughout the territory of India, it emphasises the same principle. It is true that our Parliament has yet not been able to achieve this objective. That is because Indian democracy feels that the stage has not yet arrived when an effort can be effectively made to introduce a common civil code

role of muslim leaders

The Muslim leaders, who believed in secularism made a sustained effort to educate Muslim public opinion, and prepared the Muslims to accept the view that in the matter of a civil code Muslim scripture has no relevance, as in the matter of the Hindu Code, Hindu scriptures were held to have no relevance. When this is done, it will facilitate the passing of a common civil code in terms of Article 44.

Shah Walliullah (18th Century), for the first time, in the history of Indian Islam, felt that time had come when every injunction of the Sharia and every law of Islam should be presented in a rational way.

Sir Syed Ahmad Khan found sanction from Islam itself for progressive and secular approach. He was aware that in India Islam needed a Luther. His secularism and rationalism was based on a saying of the Prophet: "I am "a human being like you" Sir Syed concluded that Islam has nothing to do with worldly affairs. According to him it is wrong to believe that Islam is directly related to all worldly matters and that, therefore, nothing can be done without obtaining a religious sanction. Reason is the only weapon which can decide the value of social and moral code of Islam. He held that the principles advocated by Islam are more ethical and are common to all other religions. Sir Syed stood for keeping the political life separate from religion.

Chiragh Ali's view of Islam as a religion is quite apart from inculcating a social system. The Mohammedan polity and social system have nothing to do with religion". Islam is so sufficiently elastic that it can adapt itself to the social and political revolutions going on around it. It is not a barrier to the political, social or moral innovations. Chiragh Ali regarded the Prophet primarily as a reformer who supplanted ancient Arabian superstitions by monotheism, elevated the moral standard of Arabs and other people and improved the lot of women by restricting polygamy, discouraging slavery, and abolishing infanticide. To Chiragh Ali, the Mohammedan common law or Shariat is by no means unchangeable or unalterable.

Another great Muslim intellectual Khuda Baksh also forcefully advocated the separation of religion from social and political life. He attempted to free Islam from the "fetters of Authority and the Dead Hand of the Past" He held that it would be a merest affrcnt to contend that religious and social systems, bequeathed to us thirteen hundred years ago, should now be adopted in their entirety without the slightest change or alteration. His view was that the subordination of religion to the State is a step forward in the direction of reform and progress.

Badruddin Tyabji who presided over the third session of Indian National Congress held in Madras in 1887 held views similar to those of Khuda Baksh. He also advocated the separation of worldly and financial affairs from religion, and pleaded that in their own interest the religious leaders should keep themselves aloof from all purely financial and mundane matters.

"It is to be noted that the liberals in the last quarter of the 19th Century and in the beginning of the 20th Century were guided by scientific development. Their effort was to decide the validity of the social laws on the basis of science."

Sulaiman Nadvi, another great scholar, admitted the separation of Church and State in Islam. It is to be noted that the liberals in the last quarter of the 19th Century and in the beginning of the 20th Century were guided by scientific developments. Their effort was to decide the validity of the social laws on the basis of science.

This legacy of secularism was accepted and enriched by the great Muslim leader Dr. M.A. Ansari. To him the crux of secularism was the communal harmony and the establishment of a national non-religious state in India. He explicity said that any Hindu who thinks of establishing a Hindu State is labouring under great

ellusion. In the same way if a Muslim thinks of a Muslim State he is also living in a Fools' Paradise. He explained [illegible] meant neither Hindu Raj nor Muslim Raj. It [illegible] Raj protecting the just and the [illegible] and privileges of all irrespective of [illegible]ous beliefs.

[illegible] was one of the very few Muslims who [illegible] Muslim problem is only a part of the [illegible]ms of the rights of minority and backward [illegible] examined the Hindu-Muslim problem in a n[illegible]ous light. He was of the opinion that secular and enlightened nationalism is capable of playing a vital and constructive role in the history of modern India.

"So far as principles of secularism are concerned, if we were to abandon these in our country, it would result in social and political disintegration on a scale which will make it impossible for us to live as citizens of a free, self-respecting, progressive, or prosperous nation."

Maulana Abul Kalam Azad presents another shining example of secularism in India. His secularism was the result of rationalism, partly derived from Sir Syed and partly the outcome of the study of the Western civilization. He asserted that a person has no claims to be called 'educated in the modern world unless he studied modern science, philosophy and literature.

Unlike the orthodox Ulema, Maulana Azad did not make a plea for "Islamic nationalism". To him nationalism must be secular. He emphatically advocated that national life in independent India should be built up on the basis of common citizenship, secular constitution, composite culture and the principle of final authority of the people in non-spiritual matters.

secularism, crucial for us

In my opinion, secularism has to play a decisive rôle at present stage of Indian democracy. I say so because today when the Indian democracy seems to face the challenge of narrow divisive trends and tendencies, a rational and scientific approach which is the basis of secularism has become a matter of utmost importance. Communal disturbances which have disfigured the public life in the recent past, as well as the birth and growth of narrow and divisive trends and of obscurantist theories are mainly the result of ignorance; and ignorance can be fought not by legislation alone, nor by a negative fiat alone, but by education, and in the process of educating the traditional Indian mind, secularism and all that it stands for have to play a major role.

We have a legally sovereign Constitution to which we swear allegiance. It sets up a secular Republic in the sense that before the law, which regulates the governance of the State, all citizens are equal irrespective of caste, creed, or religion. It prohibits any discrimination by the State or its organs between citizens on such grounds. But our social structure and institutions, our modes of life, thought, and feeling, in general certainly fall below the standards of a secular society which have to be built up in order to sustain such a Constitution. After all even a sovereign Constitution provides only the laws and the principles by which the people who have made it, for whom it was made and who have to work and enforce it must be governed. If those for whom it is meant and those who have to work it were to lack the qualities required to operate and uphold it, there must come a time when it will be either replaced by another or exist only on paper and in name divorced from realities. Can we let this happen? So far as principles of secularism are concerned, if we were to abandon these in our country, it would result in social and political disintegration on a scale which will make it impossible for us to live as citizens of a free, self-respecting, progressive, or prosperous nation. Indeed, this is bound to be the fate, ultimately, of people of any country, where, differences of class, creed, culture, outlook, or caste, are allowed to generate such tensions that national unity, without which neither economic prosperity nor national progress in any direction are possible, is undermined. The only way in which we can prevent such a disaster from overtaking us is to raise, on secular foundations, a new and firmer social structure.

In human terms, our late Prime Minister, Jawaharlal Nehru, in his 'Discovery of India' has given eloquent expression to India's oneness in beautiful words. He states: "It is fascinating to find how the Bengalees, the Marathas, the Gujaratis, the Tamils, the Andhras, the Oriyas, the Assamese, the Canarese, the Malayalees, the Sindhis, the Punjabis, the Pathans, the Kashmiris, the Rajputs, and the great central block comprising the Hindustani speaking people have retained their peculiar characteristics for hundreds of years, have still more or less the same virtues and failings of which old tradition or record tells us and yet have been throughout these ages distinctively Indian, with the same national heritage and same set of moral and mental qualities There was somet[illegible]ng living and dynamic about this heritage which showed itself in ways of living and a philosophical attitude to life and its problems. Some kind of a dream unity has occupied the mind of India since the dawn of civilisation. That unity was not imposed from outside; it was something deeper and within its fold."

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how to bring unity

The question is how to recreate this feeling of unity? The task is positive as well as negative. We have to remove the distrust which separates. We have to weave together the strands of common life. We have to create common ideals. We have to combat ignorance. We have to remove misunderstandings. We have to bring the

(Contd. on page 85)

Communal harmony—a matter of confidence

Dr. V.K.R.V. Rao

India has an old tradition of respect for religion, says Dr.V.K.R.V.Rao, a reputed economist, in this illuminating article which has many valuable suggestions for the elimination of communal conflict. Discussing secularism in the light of our constitution, he has analysed the basic causes of the influence of religion on politics and has come to the conclusion that economic development will go a long way in building a strong edifice of communal harmony. He has suggested that central and state governments should set up communal harmony monitoring bureau to forecast probable sequence of events, as we do have for the weather. Frequent inter-religious conferences should be held to highlight the noble values and the dignity of human beings, which form the basis of all religious teachings. The media has an important part to play in projecting the similarities between the various faiths, thus bringing the different sections of masses on a common psychological platform.

SECULARISM IS A WORD WHICH HAS its origin in western countries and relates to the separation the church from the State, giving the State a position neutrality between different religions, while at the me time guaranteeing all citizens the right to profess ıy one of them. In some ways the word 'secular' is used a contrast with the word 'Religious'. This has metimes led people to believe that secularism is posed to religion, but broadly speaking it is used not as posed to religion but as divorced from all religions or ligion having nothing to do with the conduct of state fairs. In India the word has been used not in an anti-religious sense, but meaning treatment of all religions in an equal fashion and ruling out any discrimination of any Indian on the ground of his religion. Use of the word secularism in this sense has been characterised by Mr Ashish Nandi as 'Indianism' which has no place in Oxford English dictionary or in the Webster. But long usage has given it in India the sense of equal respect to all religions and identified the word secular with tolerance among the different religions in India. As pointed out by Dr. Radhakrishnan, "secularism does not mean irreligion or atheism or even stress on material comforts. It proclaims that it lays stress on the universality of

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spiritual values which may be attained by a variety of ways." In the Indian context. secularism means equal status to all religions. To quote Dr Radhakrishnan again: "*We hold that no one religion should be given preferential status, or unique distinction, that no one religion should be accorded special privileges in national life, or international relations, for that would be a violation of the basic principles of democracy and contrary to the best interest of religion and government... No group of citizens shall arrogate to itself rights and privileges which it denies to others. No person shall suffer any form of disability or discrimination because of his religion but all alike should be free to share to the* fullest degree in the common life. This is the basic principle involved in the separation of church and State."

"Secularism was formally introduced only in 1976, 26 years after we had been practising secularism in the country, by inserting it into the preamble of the Constitution which characterises the nature of the state."

in the light of the Constitution

The word secularism was not used in the Indian Constitution when it was first formulated and adopted for enforcement in 1950, but the Constitution contained a number of clauses which could be identified with the concept of secularism. Thus article 25 guarantees freedom of conscience and free profession, practice and propagation of religion Sub-clause (1) of the article states "subject to public order, morality and health and to the other provisions of this part (part referred to is chapter on fundamental rights), all persons are equally entitled to freedom of conscience and the right to freely profess, practice and propagate religion.

Sub-clause (2) says "nothing in this article shall affect the operation of any existing law or prevent the State from making any law (a) regulating or restricting any economic, financial, political or other secular activity which may be associated with religious practice, & (b) providing for social welfare and reform or throwing open of Hindu religious institutions of a public character to all classes and sections of Hindus"

Article 26 gives the freedom to every religious denomination or section thereof to manage religious affairs, again subject to public order, morality and health. Article 15 prohibits discrimination against any citizen only on the grounds of religion, race, caste, sex or place of birth, while articla 16 provides for equality of opportunity for all citizens on matters relating to employment or appointment to any office under the State.

Article 29 gives all minorities including religious minorities the right to protect their language, script or culture and guarantees that no citizen shall be denied admission to any educational institution maintained by the State or receiving aid out of State grants only on grounds of religion, race, caste, language or any of them.

Article 30 gives minorities including religious minorities the right to establish and administer educational institutions of their choice; and the State shall not in granting aid to educational institutions discriminate against any educational institution on the ground that it is under the management of a minority, whether based on religion or language.

Thus it will be seen that the Constitution gives religious minorities a large number of rights which makes explicit the interest of the State in giving equal respect to all religions professed in the State. This has given a new Indian connotation to the word 'secularism' in contrast to that given in western countries. Moreover this Indian attitude to non-discrimination between religions has been traditional to this country and was advocated by Indian fighters for independence even before the achievement of independence. This concept of secularism was so universally acceptable to the Indian Constituent Assembly that Nehru while proposing the basic resolution of aims and objects before the Constituent Assembly, had nothing to say on the subject of secularism though he spoke a great deal on communalism and science and the need to cultivate scientific attitude all of which have a bearing on secularism. Secularism was formally introduced only in 1976. 26 years after we had been practising secularism in the country, by inserting it into the preamble of the Constitution which characterises the nature of State.

While there should be no mis-conception of the word secularism as anti-religious, there should also be no mis-conception of the freedom of religious institutions *to function in any manner of their liking irrespective of* the laws of the land governing the legal behaviour on the part of the citizens. Article 25 guarantees freedom of conscience and free profession, practice and propagation of religion, subject to the qualifying clause 'subject to public order, morality and health and to the other provisions of this part', which means the other fundamental rights mentioned in part 3 of the Constitution, and also gives the State the right to regulate or restrict any economic, financial, political or other secular activity which may be associated with religious practices.

"I do not see why religion should be given this vast expansive jurisdiction as to cover the whole of life and prevent legislature from encroaching upon that field. After all what are we having this liberty for? We are having this liberty to reform our social system which is so full of inequalities, discrimination and other things which conflict with our fundamental rights."

religion not a roadblock for reform

The intention not to treat religion as a permanent block against change or reform was made clear by the

father of the Constitution Dr. B R. Ambedkar when he intervened to counter the attempt to introduce a saving clause on personal law under article 13, pointing out that article 44 of the directive principles had stated that the State will strive to bring about a uniform civil code and pointed out that if such a saving clause on personal law was introduced into the Constitution, 'it will disable legislatures in India from enacting any social measure whatsoever. Religious conceptions in this country are so vast that they cover every aspect of life from birth to death. There is nothing which is not religious and if personal law is to be saved, I am sure about it that in social matters, we shall come to a stand-still. I do not think it is possible to accept a position of that sort. There is nothing extraordinary in saying that we have to strive hereafter to limit the definition of religion in such a manner that we shall not extend it beyond belief and such rituals as may be connected with ceremonials which are essentially religious. It is not necessary that the sort of laws, for instance laws relating to tenancy, or laws relating to succession, should be governed by religion... I do not see why religion should be given this vast expansive jurisdiction as to cover the whole of life and prevent legislature from encroaching upon that field. After all what are we having this liberty for? We are having this liberty to reform our social system which is so full of inequalities, discrimination and other things which conflict with our fundamental rights. It is therefore quite impossible for anybody to say that personal law shall be excluded from the jurisdiction of the state". Having made this categorical declaration Dr Ambedkar softened his statement by adding that there was no obligation on the part of the State to do away with personal laws and all that was given to the State was the power to do so if it wanted.

"Religious conceptions in this country are so vast that they cover every aspect of life from birth to death. There is nothing which is not religious and if personal law is to be saved, I am sure about it that in social matters, we shall come to a stand-still."

Inclusion of the word 'secular' however does not seem to have made for more communal amity or freedom from communal conflicts leading to violence. Neither the provision of specific articles in the fundamental rights on the subject of minority religions nor the subsequent inclusion of the word secular in the preamble, which characterises the dominant feature of the Constitution, seems to have had much effect. It is high time that we inquire into the question why, though we talk of secularism, we find civil disturbances arising from conflicts of different religious communities, especially between the majority community of Hindus and the principal minority community, Muslims. To this has now been added the Punjab problem where there is no open conflict between Sikhs and Hindus, but only numerous acts of terrorism directed both against Hindus and some Sikhs, presumably for the establishment of a new State of Khalistan in place of the existing Punjab. This Sikh-Hindu conflict on a political issue has come as a further blow to the concept of secularism and the need for a more indepth investigation of the practice of secularism and its relation to religion.

factors leading to factionalism

In his comprehensive study of secular values for secular India, Mr. P.C. Chatterjee, former Director-General of the AIR has suggested that the following four factors seem to have played a role in most of the major Hindu-Muslim riots of the decade after 1960.

(a) Ideology—Communal ideology both Hindu and Muslim. This factor, operating at the national and local levels, was the prime factor in the 1960s.

(b) Economic rivalry— since 1971 what has been emerging as an increasingly important factor is the economic rivalry between Muslim craftsmen, cultivators and others and Hindu competitors often of the lower castes.

(c) There has been a loss of confidence in the administration and the police, which has been politicized since 1967 when the Congress party ceased to be a monolith holding uncontested power at the Centre and in the States.

(d) As a corollary to the third, and due to the factors such as economic rivalry and the growth of black money, the underworld, the world of hired goondas has come to play a bigger role in communal conflicts

To my mind, while all these factors are important, the third one mentioned by him, viz. loss of confidence in the administration and the police, seems to be most important. Building up hate campaigns, circulation of false rumours of a communal character, and belated action taken by the administration inspite of warning signals have been important factors in causing these riots and loss of confidence in the administration. There have been many judicial inquiries but in many cases, their reports are not published and in more cases hardly any action seems to have been taken on the decisions contained in the report. Once the communal incident is brought under control everybody forgets all about it and no long term action is taken to meet the possibility of recurrence of these riots after some time The most important thing to do in my opinion for saving the secular character of the Indian State is taking necessary administrative action well in time long before the incident flares up into a communal riot. There should be a special section in the Home Ministry both of Central

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and *State Government* whose sole function should be to keep watch on the communal situation in different parts of the country and ask for necessary action to be taken well in time before any serious development takes place.

differences—traditional than spiritual

Once the minorities are convinced that the administration is impartial, prompt and effective in guarding communal harmony, a great deal would have been done to remove the blot of communal riots from the Indian scene. At the same time, it is important to see that the minorities get their fair share in appointments in the public sector, and admissions in educational institutions; and that a close watch kept on their secular progress and action taken to speed it up or remove any obstacles coming in the way of their economic advance. In addition, the basic philosophy behind Indian secularism, viz., equal respect for all religions and the conviction that all of them preach the same basic values and the differences are more traditional than in spiritual terms should be constantly reiterated in public discussions and private discussions. I think it would be a good thing if the practice could be introduced of starting all public functions as well as daily radio broacasts with a common prayer in the name of all religions professed in the country, for peace and harmony amongst Indians and their social and economic development. The important thing is to remove from the public mind the belief that there is some inherent conflict between the different religions in the country and that only coercive methods can keep the communities from having conflicts with each other. This is the very antithesis of secularism as we conceive of it in this country. I think attempts should be made to have inter-religious conferences where the focus would be on points of similarity in values and the gospel of service of the poor and the handicapped and preserving the dignity of the human being, as something which is preached by all religions. It may also be worth while considering banning of political parties of a communal character, for religions and politics have nothing to do with each other, though religion in a broad sense of spiritual values may be given some role in influencing political campaigns and conducts.

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economic development for communal harmony

There is no reason to despair. There has been a long tradition of communal harmony in this country, especially in rural areas where the vast majority of our population lives. But economic disparity is there in both rural and urban areas. So economic development will help to solve the problem of inter-communal differences more especially when the secular state is seen to play an active role in solving the economic problems of the minorities. One should also think of an active orientation campaign for the personnel who are administering law and order in the philosophy and the political logic behind Indian secularism, and the need for maintaining communal harmony and for taking necessary steps stemming from this understanding.

Just like we have weather bureau which is constantly monitoring the prospects and possibilities of change in weather, there should be a communal harmony monitoring bureau, integrating sections in both the Central and State Home Ministries which I have suggested earlier. There should be daily or weekly broadcasts on the communal situation in terms of harmony and action taken if necessary in cases of breaches in this harmony.

Ultimately, communal harmony is a matter of confidence and a feeling that the minorities are being actively helped in their economic problems. Once this is not only accepted and practised, but also conspicuously shown as being practised, it will go a long way in meeting the problem of communal conflicts in India. We should not give up the ideals of secularism in the Indian sense. India can never be a Hindu theocratic State nor can it become a state without any regard for religion. The Indian tradition respects religion and responds to it. Only what we should see is that the right stimuli are applied and the right response evoked as a result of deliberate imaginative and planned action on the part of not only public authorities but also of the intelligentsia professional classes and the opinion-makers in the country. Above all the mixing of politics with religion must be frowned upon as a deadly sin, and all attempts made to meet the problems of the minorities without the need for their taking a political form and exploitation of the same by political parties. Though one feels very sad that communal violence and conflicts should still persist in secular and post-Gandhi India, yet, as I said earlier, one need not despair. I feel optimistic that the problem can be solved provided educational, administrative and economic action is taken well in time to meet the problems of minority communities. Secularism does not mean just allowing people freedom to practise their religions; it also means special protection for the people who practise minority religions and that is what I would plead for in dealing with this problem of communal conflict and the failure of secularism in India.

"Ultimately, communal harmony is a matter of confidence and a feeling that the minorities are being actively helped in their economic problems. Once this is not accepted and practised, but also conspicuously shown as being practised, it will go a long way in meeting the problem of communal conflicts in India."

Democracy,
Socialism, Secularism,
Unity and Integrity–
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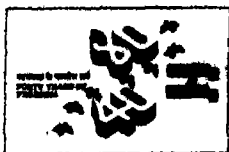
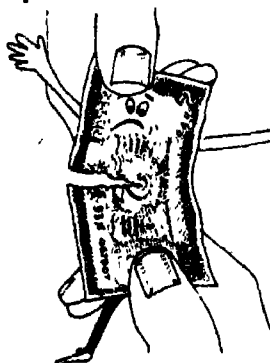
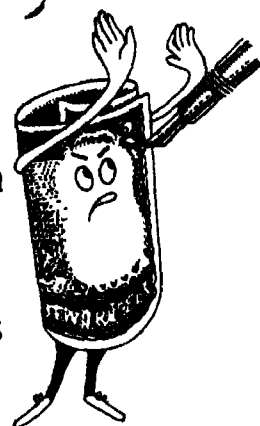

I'm worth good money... So don't treat me badly

Being a Currency Note, I'm valuable to whoever possesses me... and to the nation as well. Do you know, over 660 crore pieces of notes like me are printed every year. And the total cost of printing is really enormous.

Yet, alas, we don't live as long as we should. Improper handling shortens our existence. In fact, the life of notes like me is the lowest in India, than anywhere in the world. On an average, over 300 crore pieces of notes are destroyed annually —what a waste.

So I beseech you, do treat me right. If I were to be damaged or spoilt, it would tear me apart... a loss to you, a loss to the nation.

It's all so easy to avoid mishandling. Here are a few pointers:

* Do not handle me with oily or wet hands.
* Do not write on me – no personal messages not even telephone numbers, please.
* Do not roll or crumple me up – I may rip.
* Do not make multiple folds.

And see – by mutilating me you run the risk of not having me accepted by anybody. Even the Banks may refuse to replace me if I am torn too badly, or if part of me is missing, or if my number is beyond recognition.

So please – handle me nicely.

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- Oriental Bank of Commerce
- Punjab National Bank
- Punjab & Sind Bank
- State Bank of India
- State Bank of Bikaner & Jaipur
- State Bank of Hyderabad
- State Bank of Indore
- State Bank of Mysore
- State Bank of Patiala
- State Bank of Saurashtra
- State Bank of Travancore
- Syndicate Bank
- UCO Bank
- Union Bank of India
- United Bank of India
- Vijaya Bank

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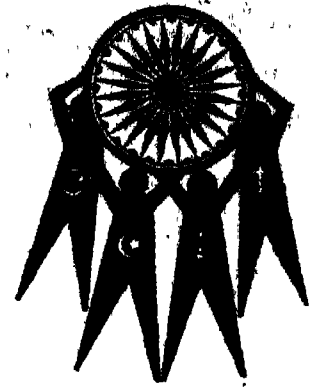
The impossibilities of secularism

Dr. Malcolm Adiseshiah

Dr. Adiseshiah, a well-known economist and a social thinker, has brought out very clearly the chinks in the armour of secularism as practiced in our country. Comparing secularism as an ideology with religions, he points out that while the former has no theory and doctrine, the latter has. But, there is no cause for despair, he says. The road to arrive at the destination of secularism is long and arduous, but, with determination and a strong will, we can reach the goal. He has suggested several ways and means to achieve the end. Basically an economist, he has convincingly introduced the element of economic development into the secular ideal. He asserts that as long as the vast majority of our population remains stricken with poverty and in a state of assetlessness, secularism would not gain much ground.

WE HAVE WRITTEN SECULARISM INTO OUR constitution. We have declared ourselves as a secular Republic.

Few of us understood or realised the impossibilities involved in this declaration of secularism, unlike the three accompanying terms, sovereignty, socialism and republicanism which have a long history, backed by solid theory and a well understood popularised doctrine.

The impossibilities of secularism are the antimony of these basic features.

negativism

First, secularism, like protestantism, non-conformism, non-formal education, is essentially a negative concept. It is clear about its donts, it is silent or weak about its dos. If one asked, what is secularism ? the answer is that secularism is keeping religions and life apart, that one's religion must not be brought into public life, and that one's religion is a personal, private affair. This negativism, of not doing something, of not projecting one's belief on to society, or on to others, is no basis for understanding and accepting an important life issue like secularism.

theorylessness

Second, secularism has no theory behind it. Sound theory is the basis for the good life and sound practice. We have only to contrast secularism with the great religions—Hinduism, Buddhism, Islam and Christianity, which have an impressive doctrinal theory undergirding each, to realise the impossibility of secularism. No action is possible or meaningful unless the reason for it is known and accepted. That is theory, of which doctrine is a sub-set. The theory and doctrine of the great religions are such as to call for total personal commitment of its elite (the priests, the monks, nuns, imams, ulema etc) and ready, almost blind acceptance and dedication by its followers. In contrast, secularism has

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no theory and no doctrine which can inspire its leaders or fire its followers. Have we asked ourselves, why we have no secularist leaders in our country? The nearest we got to one, was Jawaharlal Nehru, but with him, secularism got mixed up with agnosticism.

contradictoriness

Secularism implies that all religions are equal in value and the call to commitment. But that is also the teaching of all religions—explicit as in Hinduism, and implicit as in Islam and Christianity. There is no uniqueness in this implication of secularism, except that every religion is also founded on the belief that its doctrine is the highest, purest doctrine, its perception of reality is unsurpassed, and as a consequence its way of life and deliverance from life are the privilege of only its followers. This part of the belief of all religions straight away contradicts the beginnings of a possible doctrine of secularism in two ways. First if each religion in its theory and doctrine teaches that it is unsurpassed, then the secularist thought of treating all religions alike becomes empty rhetoric and is a first contradiction. Second, and what is an even more serious contradiction, is, that if each religion believes that it is the only way of life, of truth and of fulfilment after this life, then there is an inescapable obligation facing its acolytes, elites and devotees to bring as many persons as possible who are outside its fold into it.One's religion must be proclaimed in all ways and at all times to bring others into it. Secularism which suggests that one's religion is only one's personal concern is completely contradicted by religion in both theory and practice.

"If one asked what is secularism? the answer is that secularism is keeping religion and life apart, that one's religion must not be brought into public life, and that one's religion is a personal, private affair."

contrariness

Perhaps the most tragic of secularism's *dilemma* is that its adovocates are the ones who act contrary to its emerging content. All our political leaders in the days of colonial rule acted in the spirit of secularism, but they were too busy fighting for the country's independence and going in and out of British jails to understand and explain explicitly to us, the people of India, the doctrine of secularism. Today all major political parties proclaim themselves as secularist. Today all major political parties proclaim themselves as secularist-that to them religion is a personal affair which does not influence or determine *their public or political actions. And* yet everyone of them, including the communist parties, when it comes to choosing candidates for elections to the Panchayati Raj, legislative or parliamentary seats, go by the religion and caste of a candidate in giving the party ticket. What people see before them is, not all religions being treated as of equal value, or religion being a purely personal matter, or the caste label being irrelevant and an accident, but that a Muslim is chosen for a Muslim constituency, a Brahmin is chosen for a constituency like Banaras where Brahmins are decisive leaders, that a Nadar is chosen for Nagercoil, a Vokkaliga is given a ticket in a Vokkaliga constituency and so on. A similar role is played by a person's religion, caste or sub-caste when it comes to securing employment or admission to educational institutions. Some of our accepted, legislated and even constitutional procedures, like reservations for the backward classes (which are always in terms of castes or subcastes), or the right of minorities, religious or linguistic, to establish and administer educational institutions of their choice) go against the secularist imperatives. Our political and public actions are thus contrary to our secularist declarations.

the way out

Is there a way out of this impossibility which secularism represents?

There is no simple way.

The way is long drawn out, tortuous, and in need of persistence in face of constant denials and defeats

theory and doctrine

In the long run, secularism, if it is to be a way of life for us 800 million Indians, has to be based on a theory and a doctrine, which in the first instance has to be Indian because I know of no other country which has as large a population as India except China (and we are told that within 2 decades India will surpass China), and equally I know of no other country with a deeply rooted system of castes and sub-castes as well as an enormous plurality of religions ans sub-religions. The theory to be developed must, *on the one hand, build on the two emerging* insights of secularism-that of the equal worth of all religions and that of religion being a relationship between an individual and his perception of reality which should not be projected out into public life. (It necessarily involves some deflating of the inflated claim of all religions.) On the other hand, it has to take account of the fact that in a country with over 800 million people today, religion, caste, language and culture are means by which a person is able to identify himself and remain a person, and not get lost in something called Bharat which is India. It is the task of intellectuals, academies, universities, and research institutions to work on the theory of secularism, so that in time the doctrine of secularism can find as wide an understanding and acceptance as that of Hindusim, Islam, or socialism. All of us intellectuals and our intellectual cells and institutions must engage in this task of searching and seeking a theory base for secularism.

"The theory and doctrine of the great religions are such as to call for total personal commitment of its elite (the priests, the monks, nuns, imams, ulema **etc and ready, almost blind acceptance and dedication by if followers."**

(Contd. on page 88)

Secularism —must for survival

Inder Malhotra

In the words of Shri Inder Malhotra, renowned journalist and political commentator, secularism for us is, pure and simple, an instrument for survival. Illustrating extensively, through events happening around, he has tried to establish the fact that the revival of religious fundamentalism has nowhere brought peace and progress, so much cherished by all. The author strongly advocates the view that the religion should be separated from the state and the nexus between organised religion and organised politics must be broken. While accepting that religion has a place of honour in our life, he believes that its domain should be the people's homes and sacred shrines. Religion should never be allowed to meddle with the affairs of the state, he upholds. He also points out that the communalism of the minority is as harmful as the communalism of the majority, as both vie with each other in creating chaotic conditions in the society.

FOR ALL ITS FAULTS AND FAILINGS, which are many and in some cases painful, India has come a long way since independence and partition nearly 41 years ago. Indeed, of all the former colonies which followed it on the high road to freedom after the Second World War, it has forged ahead farther and faster. One of the most important reasons for this has been the country's adherence, doubtless imperfectly and at times hesitantly, to the Nehruvian framework consisting of democracy, secularism and planned economic development with an accent on social justice the shorthand for which was a "socialistic pattern of society", later rounded off, somewhat unrealistically, to socialism.

Here we are concerned with secularism alone, so other matters can be left aside, except to say that if events during the last four decades, and especially during the seventies, have proved anything at all, it is that India will be governed democratically or not at all. And this is as good an opening as any to make the equally pertinent point that neither democracy nor unity would be easy to maintain— to put it no more strongly than that— if the country is foolish enough to abandon the secular path. In view of the bewildering complexities and diversities of Indian society, to make the foregoing statement is only to stress the obvious.

let us learn from history

In any case, the point will be proved by even a cursory look at the plight of our southern neighbour, Sri Lanka, once a nice little island almost synonymous with happiness and now riven by a virulent conflict which has

not gone completely out of hand only because of the India-Sri Lanka accord on bringing it under control and maintaining the island republic's unity and integrity. No one can dispute that the seeds of Sri Lanka's present woes were sown when Buddhism, the religion of its Sinhala majority, was declared the State Religion and Sinhalese made the sole official language.

Having said this, one must hasten to add, that religious and ethnic conflicts in Sri Lanka could have erupted even if the 1956 decision on state religion and language had not been taken. India's own experience, as that of European nations which went through the process of nation-building and modernisation in the eighteenth and early nineteenth centuries, clearly shows that there can be neither modernisation nor national integration without conflict, turbulence and pain. After all, Europe had a thirty-year war that was primarily religious. The crucial difference since then is that we live in an age of instant communication and TV cameras of the whole world are constantly focussed on our conflicts be they in Amritsar or Ayodhya or in Jaffna or Batticaloa.

"India's own experience, as that of European nations which went through the process of nation-building and modernisation in the eighteenth and early nineteenth centuries, clearly shows that there can be neither modernisation nor national integration without conflict, turbulence and pain."

These conflicts have to be overcome, and overcome they will be. But in order that they are overcome sooner rather than later, it is necessary to realise that merely to refrain from naming a state religion is not enough. Even the Indian concept of secularism—defined as *dharma nirpaikshta* or taking no sides among religions and treating them as equal—is also inadequate and therefore of limited efficacy.

better late than never

As Europe discovered long ago, while trying to separate the Church and the State, so we are learing the hard way that while utmost respect has to be shown to all religions, all religious activity has to be in the private domain. The nexus between organised religion and organised politics has got to be broken. The gross misuse and even abuse of places of worship, with all their wealth and income, for political purposes of the most undesirable kind has now been banned by an ordinance issued by the President which would hopefully be enacted into law before long. The understandable reaction of thinking people to this has been that the law has come forty years too tate. One can only enter the caveat that it is better late than never, rather than vice versa.

The task that is cut out for us, if we really want secularism to take deep roote, is extremely arduous, especially because the last quarter of the twentieth century has been a period of almost tidal rise of religious fundamentalism all round India, reaching even the Soviet Central Asian Republics. But because the odds are so heavy, the stakes in the preservation and protection of secular values become that much more vital. From this it follows that the mounting challenge cannot be met if the lackadaisical manner in which secularism has been practised so far persists. It is difficult to quarrel with Mr. Khushwant Singh when he describes the Indian state as "seculiar" to rhyme with peculiar. After all, what kind of secularism is it that allows the performance of Hindu rituals at state functions ? Nor should the raising of this question be taken as a signal for burdening every state function with a comprehensive combination of rituals of all religions "Ishwar Allah Tero Naam ...", the opening line of Gandhiji's prayer meetings expresses the noblest sentiment. But, in the surcharged atmosphere of the forties, could it withstand the competing cry of "Allah-o-Akbar" ? Let us not re-enact similar competition in this day and age.

Why should there be any religious invocation at any state function at all in a country wedded to secularism ? There are excellent ways to lend dignity, even enchantment, to any ceremony without bringing in any religion.

religion has a place of honour

Religion, of course, must continue to have a place of honour in national life because it does move people powerfully, often profoundly. But the place for it is in people's homes and sacred shrines, not the political podium. Few constitutions in the world allow such a freedom to practice and propagate one's religion as does the Indian Basic Law. This must be scrupulously followed. Speaking for myself. I am even prepared to concede that, irrespective of the merits of a common civil code in a secular country, it is better to let reform of personal law in a minority religion like Islam take place internally rather than be imposed externally. But on one point there can be no compromise. Communalism, which is nothing but crass exploitation of religion in order to tear apart the fabric of national unity, has to be fought with equal vigour, no matter whether it is the communalism of the majority or of any one of the minorities.

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Time was when Jawaharlal Nehru used to say that communalism of the majority was always bound to be more dangerous than that of the minority. In the context of the immediate aftermath of partition, this had a certain validity not all of which has disappeared but most has. Forty years on the stark consequences of the naive belief that minority communalism can be relatively

harmless are there in the blood-spattered country side of Punjab for all to see.

We have spoken of the need for keeping state functions and religion apart. Leaders of government and of opposition parties are, of course, entitled to pursue their religious faiths as citizens and individuals. But it will help if they do so in their homes privately and not advertise their religious practices in newspaper photographs or on TV. Their pilgrimages also need not be played up as major public events.

What is happening, however, is that *yagnas* and even *tantric yagnas* for blatantly political and partisan purposes, often attended by the highest in the land, are being held. As Mr. P.N. Haksar puts it so nicely, how can you promote either modernity or secularism or scientific temper in a society whose leaders "wallow in the primordial slime of superstition and occult"?

"Communalism, which is nothing but crass exploitation of religion in order to tear apart the fabric of national unity, has to be fought with equal vigour, no matter whether it is the communalism of the majority or of any of the minorities."

exploiting religious sentiments

The crunch comes, however, when not dyed-in-wool communalists alone but also leaders and strategists of secular parties cynically, indeed suicidally, exploit the basest of religious sentiments for temporary electoral gains or such other political expediency. The country has already paid too heavy a price for this madness. Once you start asking church leaders in Kerala to tell the flock from the pulpit how to vote or enlisting the support of other religions, you inevitably create conditions wherein the elected chief minister of Punjab is expected to bow to the dictates of the Jathedars and high priests of the Akal Takht and the Golden Temple, as happened during the time of luckless Mr.Barnala.

Not long ago the Shankracharya of Puri was able to deplore, denigrate and defy the law on Sati with impunity. The Imam of Jama Masjid has also been able to get away with egregiously irresponsible behaviour. What kind of signals will all this send to those who are trying hard to fight a desperate battle in defence of sound sense and secularism?

Finally, a word needs to be said about the so-called "Hindu backlash" which is much talked of despite the hopeless fragmentation of Hindu society along caste, regional, linguistic, social and sundry other lines. Doubtless, there are some who believe or at least pretend to believe that most of India's troubles would disappear if it is declared a Hindu state. Nothing can be more absurd than this.

Those concerned will do well to take a look at neighbouring countries where populations are almost exclusively the believers in Islam, which is manifestly a far more homogenous religion than Hinduism, and which make no bones about being theocratic. Even Bangladesh, for reasons which need not detain us, has been proclaimed an Islamic state. But with what result? The strife that drove President Ershad to this ploy has become aggravated; it has not abated.

Even more instructive is the experience of Pakistan where General Zia-ul-Haq has been ushering in *Nizam-e-Mustafa* ever since he seized power eleven years ago and dissatisfied with the rate of Islamisation, has now staged his second coup. Have ethnic and regional conflicts among the Muslims of this state, which considers itself the paragon of Islam, disappeared? The Ahmediyas were legislated out of lthe pale of Islam in Pakistan even before Mr.Bhutto's overthrow. Has this unified the rest of the Muslim population? Were not 150 people killed in the northern territory of Gilgit only the other day in horrendous shia-sunni riots? Of what the conflict between the Muhajirs and the Pathan Baluch groups has done to Karachi the less said the better. Skipping over Iran and Iraq, it would be useful to have a look also at Beirut where it is question not merely of a conflict between Muslims and Christians, Shias and Sunnis, Palestinians and non-Palestinians but also among various militias of Shias themselves! They are busy killing one another while Syrian troops in Southern Beirut look impassively on.

"Must one say more to hammer home the lesson that secularism for us is not an ideal but an instrument, pure and simple, for survival."

Must one say more to hammer home the lesson that secularism for us is not an ideal but an instrument, pure and simple, for survival. □□□

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Life demands collective answers

S.K. Dey

There is a czar lurking within each of us and it can not be overpowered by force, says Shri S.K. Dey, a doyen among post-independence administrators. Having been closely associated with the early phase of panchayati raj movement and an ardent upholder of decentralisation of power, production and resources, he traces the rise of fundamentalism to the economic neglect of the countryside which is mostly poor and uneducated. He is also sore with the rapid urbanisation which has given birth to a new five star culture at the cost of rural areas. The author, a former central minister, holds the view that fundamentalism, whether in politics, religion or administration, evolves from the epicureans, the overfed on the tricksters. Linking fundamentalism with vested international interests, he points out that mighty industrial nations of the world refuse to put a halt to the mass manufacture of armaments in order to dump them to neighbours all across the globe. For consolidating secularism, the author prescribes the establishment of a global school of enlightened vision so that the cumulative archives of totems and taboos that still rule the inner core of man could be incinerated once for all.

YOJANA MAKES IT AN ANNIVERSARY ISSUE every year, to pick up one or the other of the basic questions that should agitate a thinking mind. The Editor makes it his special concern to shake up even from secure slumber whomever he chooses to act as a tool in his never-ending quest. This year it is the serene and cosy phrase "Secularism," which is sworn in by every one in this great land of "Bharat Mata." A reference to the dictionary leads but to confusion. The only parallel seems to lie in the Planning Commission that has achieved the mastery of thoughts, ideas and words, as a miracle to mean something pleasing to every one thirsty for empathy. Politicians of India pursue the like trait with mild variations in tints. The learned in the land suffocate people spelling more than they conceal. Even the learned Shankaracharya of Puri will impel the Adi Shankaracharya of the seventh century from village Kalady in Kerala to hide his physiognomy from his other incarnation out of sheer embarassment, unless he has sought Nirvana to escape from those he left installed behind.

the trauma of partition

To come to some events incidentally, that must have a direct bearing onsecularism, can one find any reasons whatsoever for what and why the Independence of this subecontinent should have cost millions the "Dharitri Mata" that had given birth to them ? Can a sensitive mind ever reconcile itself to this irrational and unnatural severance of its umbilical cord from the soil to which it had belonged, from which it had assimilated the nutrition for untold generations behind, from where

INDIA : A CONFLUENCE OF CREEDS

it had garnered the culture that it had been proud of? What could bring about such a convulsive uprootal of humanity? The current shocks of Amnesty International and many a super power in the world over the denial of human rights etc pale into insignificance before this massive exchange accompanied by inhuman violence on people in uncounted millions, both ways across this Subcontinent. And, this had been promoted and smiled over by the mightiest of occupying Powers in whose empire the sun never could set completely. For the great world this of course was a passing event!

What is still happening in the Middle East over Jerusalem and in areas near around and in South Africa as a land mass, deplored by the world body but sustained by major powers and their vested interests?

"It is amazing what the nation is squandering over urban five star culture across the country at the cost of rural areas that must needs bear the brunt of exploitation of current resources and future ones accruing through ever expanding debt traps, internal as well as external."

To quote another monstrosity, the second World War is said to have cost more human lives and properties than all the wars fought, big or small, since history had begun to be recorded. This war had direct involvement of the developed and modern sector of world nations. What had been the motivations and to what ends? What repercussions could these have on secularism as a living philosophy for life as a whole, not vis-a-vis the developing nations? Are we sure, an exercise in honest and blunt heart searching would not prove to be a sounder route to the answer that the Editor seeks? Should one not make it a confession instead of an exposition, and more so in a personal vein?

In the early twenties, the headquarters of my district had a population hardly over ten thousand, the Sub Divisional headquarter about a third of the District Headquarter and the Thanas—just with a Police Station and biweekly bazar with less than half a dozen shops if at all. The District Headquarters had four cars belonging respectively to the Deputy Commissioner, the District Judge and the I.M.S. Civil Surgeon and the fourth belonging to a local zamindar who alone had a two storied brick building, the other three living under thatch roofs. The residents—officers as well as civil population for limited numbers had Bashas (Lodging houses) to live in, their permanent homes being in the villages they all had sprung from.

The centripetal forces began to have major play in the direction of metropolitan cities, Calcutta, Bombay and Delhi at the first instances, soon after August 15, 1947, and subsequently by induction towards state capitals. The Districts in India on an average, cover a population larger than a hundredth or higher sovereign states, listed under the United Nations. These too joined the centripetal pulls on initiative and resources in man power, enterprise, material and capital derived from land to provide enrichment and urban housing to offsprings of rich farmers with their urban education and endowments settling down to add to the cavalcade of cities. They also drew their ageing parents in a one way traffic towards galloping urban citizenship with added resources in suction from rural India to add to metropolitan urban living. The city of Hyderabad and Secundrabad from the beginning of the new Andhra capital, is a glaring example alongside many others likewise.

the delay in decentralisation

With the avowed will to the contrary of the Government, whatever its colour and complexion at the centre or in the states, the suicidal one way traffic towards the giganto-mania of urban living continues to grow apace. It is amazing what the nation is squandering over urban five star culture across the country at the cost of rural areas that must needs bear the brunt of exploitation of current resources and future ones accruing through ever expanding bebt traps, internal as well as external. The Sub divisional headquarters, the Taluka and Thanas instead of corresponding growth in geometric progression, stare us in the face as the dilapidated ghosts of the erstwhile colonial regime. Things are not happening entirely unexpected. I seek indulgence for quoting from a chapter "Uneasy truce between two Indias", of my book "Power to the People" published early 1969.

Gandhiji asked for decentralisation of politics, power, production, distribution and culture. We have gone about it in a reverse gear in a crash programme of centralisation. We have the amazing spectacle of multistoreyed buildings and the new skyscrapers, the elite therein vying for amenities and affluence and the growing multitude of jhuggie dwellers spreading and sprawling far and deep into the countryside. We are out to build a pyramid of civilisation with its apex in steel and cement and the base and intermediate layers to stand on bamboos, chattai and mud. The ocean is bound to rise at last. When the deluge follows, others from distant horizons must join the fray. It is not entirely unlikely that the battle of "Kurukshetra" may have to be fought all over again. Are we sure, that the unrest growing across, is not a prelude?

"We are out to build a pyramid of civilisation with its apex in steel and cement and the base and intermediate layers to stand on bamboos, chattai and mud. The ocean is bound to rise at last. When the deluge follows, others from distant horizons must join the fray."

The middle class throughout has played its part as the historic intermediary for extension of thinking and living towards renaissance for people at large, taking its cue from an enlightened top. The youth of India in particular, at the very forenoon of our Independence began to hold at ransom virtually our nation as a whole, towards a culture from the west, totally alien to our own,

as if in a rapid race. On the expiry of the colonial "Shangrilla", the west had begun by and large to turn their face away from the phantom world built on sands of empires. Indulgence in drugs is a new symbol of their enforced flight away from modernism. In our stupidity, we have begun to tread the path left behind by others to ape them all over. The galaxies of rising elite and the nouveau-riche join the big march.

Let us sean the universities multiplied in number nearly twenty times over since Independence, the profession at play, of law, justice, administration, health *commerce, industries— name any field. Have a look at* the hundreds of thousands of expatriate in foreign lands, practising and preferring commerce on their basic degrees and professions at India's fabulous costs earlier. They herald their foreign emoluments, totally oblivious of the ugly contrast they are, to their counterparts from Japan and China. Look at our politicians— the cross section in varying degrees in all parties, their full mouthed, open breasted boasting on the "Largest democracy in the world" and the double think, double speak character we reflect excelling all races and cultures known and unknown. The "Aya Ram", "Gaya Ram" are so patent to our brazen character !

"Unfortunately, for life and history, the realisation is very rare, that taboos and totems have something of the character of the icebergs with but a fraction exposed, the bulk being submerged in the ocean below of the unknown and the unconscious."

the experiment on a mini-scale

Soon after Independence, a quest was on, under direct week to week contact with Nehru, to discover a "road to New India". It was to use rehabilitation of the millions of refugees as the first beneficiaries of the new experiments. Alas, the magnitude of the number to be rehabilitated was like a flood. The experiment necessarily had to be on a mini-scale. Offshoots are there as living symbols of what could be done, given the will. These can be termed secular, even though in composite communities, They practise the practical "right to live," the essence of basic living, unalloyed amity between neighbours, and all religions and institutions standing side by side with entrances common to all, and not in combat. One example of this was Nilokheri, in Haryana, according to Nehru. The hope was that these will be multiplied ten thousand times across the landscape by way of rural-cum-urban development so that science and technology could travel to each family, shorn of lid and hindrances, and as an integral organic process envisaged by Nehru.

Community Development, Panchayati Raj and Sahakari Samaj involved over five thousand Block headquarters with adequately trained administration, technical staff, institution and field extension personnel. The hope was that in the process, the Thana, Taluka and Sub-divisional headquarters in decay for ages, could receive the blood infusion overdue, so as to act as part of the rural-cum-urban continuum as an inexorable logic. This could be so also, because of the vast number of Panchayati Raj and Sahakari Samaj institutions as the link respectively for political and economic democracy, interlocked from the grassroots to the national level. The vision and the edifice envisaged, had to tumble down in a cataclysmic feudal movement from behind the remote past, soon following the demise of the first Prime Minister.

I had the good fortune as well as perhaps the tragedy of travelling across the world at large. This turned out to be a voyage of discovery and disillusionment on behalf of the United Nations. It was "to make a broad study of rural development and how its requirements can be related to more effective U.N. efforts, the study covering Latin America, Africa, Middle East and Asia." This incidentally was also to discover a way reverse the growing one way traffic of man, material, resources, initiative and enterprise towards metropolitan cities to the progressive and escalating denundation of the basics to life in the countryside all across the world. The subject has been discussed in a central inter-agency meeting of the U.N. system at New York before the mission had started. It was discussed threadbare again on completion of the mission, over a report titled, "But, for whom ?". Although rather revolting in looks, every one had to agree with the findings, so also the first step to pursue. But further action collapsed because it could expose the sytem as whole, naked of its raiments; perhaps also so because Paul Hoffman the main catalyst to the mission had passed away.

history in retrospect

As we look back, we become aware of the era of the Buddha dominated by an awakening of a totally different order in India, as well as in the Asian countries shedding light for many a generation. We know from histroy of the visit of Alexander the Great to India on his way to the conquest of the world and his encounter with the great Porus, not very long later, on the bank of the Jhelum in Punjab. We know also of the great age that followed for the continent in the west as well as the east. We also stand as the mute witness to the decline of India reflected from the fall of the temple of Somnath onward and then down and down for nearly a thousand years as anti-climax. Sultan Mahmud came with the virgin zeal of a convert of the age against idolatry and totem raj,emerged from Muhammad, the great prophet sprung out of the desert. Unfortunately, for life and history, the realisation is very rare, that taboos and

"Secularism at best is a joke when a countryside in the deep Hindi belt in particular, can at a moment's notice be turned into a jungle fire of confrontation of an attritional character between communities tied to a common umbilical cord throughout."

totems have something of the character of the icebergs with but a fraction exposed, the bulk being submerged in the ocean below of the unknown and the unconscious. The new age of history had begun nevertheless in right earnest. India came under the rule broadly of the Pathans, the Moghuls, and then the British in a kaleidoscopic view with open eyes and across time till August 15 1947.

The British had not chosen to migrate and settle down in India as indeed, they did in Canada, Australia, New Zealand and elsewhere. Therefore our hurt and wounded pride at the hands of the colonial rulers, could be wiped off, as many a simple folk felt, through substitution of the names of the current heroes of India

"Life demands collective answers that are still to emerge. We scratch our skin, Lo and Behold, we discover the orang-outang peeping not very far from the surface in each of us. Man must still be in his teens biologically if at all !"

for immortalisation on roads and institutions and in statues of the notable against those of the British. English as a language could not be banished because the language has international connections. As regards Muslim rule, this has spread over seven to eight hundred years minus a break. They have been citizens of India throughout, and the major number of them are converts from the wide cross-section of the Hindu society from unmeasured times. The Taj Mahal, the great forts and mosques throughout, cannot be renamed and claimed as Hindu heritage by the zealots. There is outcry against Urdu, one of the most picturesque and golden tongued language that flowered under the blending of Hindu and Moghul culture in particular. Despite Gandhiji's strident call for Hindustani as the national language of India, we have the spectacle of the sanskritised version of Hindi, which the north continues pushing down to the people in the south as well as to other language areas of India. The Hindi zealots themselves can hardly comprehend the newly coined Hindi as their language in the Hindi heartland. They enjoy Urdu with full zeal in private but hate to give effect to it as a language in the constition, for this is an easy leverage politically against the Muslims.

Secularism at best is a joke when a countryside in the deep Hindi belt in particular, can at a moment's notice be turned into a jungle fire of confrontation of an attritional character between communities tied to a common umbilical cord throughout. This is so despite the lessons that followed partition in the trisectioned country internal as well as external. We seem to be losing the basic capacity to learn from experiences. How do we establish common ground between scheduled castes and tribes and the classes that the Great Aryan forefathers of ours, had designated as the masters of the former. How to establish equity and equality between man and woman in the land inspite of the perverted Shankaracharyas and their blind hypnotised followers? These are basic questions corroding all nations in the world—advanced, advancing and backward. Life demands collective answers that are still to emerge. We scratch our skin, Lo and Behold, we discover the orang-outang peeping not very far from the surface in each of us. Man must still be in his teens biologically, if at all !

prey to a calculated process

Life that has been flowing across, convinced me more than anything else, that synthetic cannibalism cannot coexist with secularism in human society. It seems also transparent, that fundamentalism whether in religion, politics, administration or any other facet of life, evolves from the epicureans, the overfed or the tricksters from under the guiles of their garments. Throughout the ages, these species have thrived on the poor and starving, engulfed in their blind faith in a mythical God for succour to bare needs and survival. It is easy for the crafty to waylay this seething yet somnolent mass in society, to act the gatherer of food and be the gunfodder. The mighty industrial nations refuse to be persuaded to call a halt to the mass manufacture of armanents with their inevitably spiralling obsolesence. Follows thus the need necessarily dire, to dump these to neighbours all across the world leading to battles of attrition fanned and feathered by the wily. Latin America in the grip of the mighty uncle of the north, under the Monroe Doctrine, some states in Africa, Middle East, also Asia are classic prey to the process

Secularism is the quintessence of the religion, philosophy and culture of a society at its highest efforescence. It never is, nor can ever be, the fruit of the perversities in nations and people. Perversities indeed are visible culmination of the lack of poise and equilibrium in communities. These can admit of no simplistic palliatives much less remedies. Science and Technology that have given birth to the modern age

"There grows wider recognition that the czar within each of us, cannot be domesticated by force. A global school of enlightened iconoclasm has to be forged to incinerate the cumulative archives of totems and taboos that still rule the inner core of man."

were for enrichment and reinforcement of the "Art of living", not for the agglomeration of commerce. The way out of the tentacles of the octopus that hold man captive today, is the organic effort on the wider horizon through an "open road". The road must aim to usher in a renaissance towards secularism on a cosmic scale. We must scrupulously avoid metropolitan culture that threatens to swallow and masticate us to pulp, as we chase the "Gold rush" with blinded eyes and folded muscles.

The time is ripe. The age is beckoning. The U.S.S.R. after seventy years of revolution miscalled "humanity uprooted", is at last on the road back to Glasnost and Perestroika. This is attracting the envy even of the big uncle, the erstwhile champion of the liquidation of the

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Let's build bridges of understanding

Dr. Prem Kirpal

In this profound piece, Dr. Prem Kirpal, an experienced administrator and educationist gives a logical description of the evolution of legends and myths which human races wove into the fabric of their culture on their journey towards the destination of progress. Tracing the history of the birth of the great religions of the world, the author explains that the idea of God was a great leap forward in the mental development of humanity and opened up an infinite world of possibilities for the development of mankind. The worship of God drew the best out of human beings and added unlimited impetus to creativity which manifested into beautiful and magnificent art, architecture, music and literature. But, he says, the discovery of the new horizons of knowledge radically changed the outlook of man and it became apparent that dogmatic theology could no longer quench his thirst of curiosity and asceticism could not suppress the love of life. Linking this emergence of new ideas with the problems of modern India, which has a society of continental dimensions, the author stresses the inevitability of secularism. His theory is that secularism, like freedom, must be cherished and won by constant effort on the part of the individual citizen and the organs of the State and society. Education, he points out, has a major role to play in the grand task of building bridges of understanding and the sharing of day to day life by the followers of all religions.

Progress in history

IDEAS AND BELIEFS SHAPE THE COURSE of history to a greater extent than other factors which bring about historical change. Belief is the guide to conduct and the motive force for action in the life of the individual as well as of society. Our beliefs determine our outlook on life and affect the development of personality. In the same way the beliefs of a society lead to progress or decay, depending upon the nature of such beliefs, the mental and spiritual health of that society, and its requirements for survival and progress.

evolution of legends

As man develops out of the primitive stage and becomes a thinking and feeling animal, able to impart his thoughts and feelings to his fellow-men, the quest for civilisation begins. The instinct for self-preservation is the strongest in early socities and the beliefs of such societies are evolved to strengthen this instinct. The sense of the unknown pervades the life of early man which is surrounded by dangers outside and fears within

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his being. In the midst of mystery and peril, and out of a heightened sense of imagination, tribal societies evolve their myths and legends which can be shared to strengthen tribal unity and to create and sustain a sense of comprehension and confidence. A common origin of the race, usually highly complimentary to the tribe and heroic achievements of ancestors, real or imagined, are embodied in myths and legends which bind the society together and provide a stimulus for social action. In this way the social ego is satisfied and the unknown is encountered in some measure of confidence.

The early Aryans derived their common ancestry from a mighty god and believed in various legends according to which the Aryan heroes were pitted against demons and out of these deadly combats they came out victorious. The earliest legends relate to trials of sheer physical strength from which the tribal ancestors come out victorious, with renewed strength and confidence. Gradually the idea of the good and the growth of ethical motives enter these myths and legends. The tribal heroes do not merely vanquish physical strength of ugly and repulsive demons and monsters; they also overcome the forces of evil in the shape of misguided enemies who have broken faith, perjured oaths, or sinned against tribal morality. In all these myths and legends there are two underlying assumptions; firstly the unknown is great and mighty and aweinspiring and without its good will or friendly intervention man can neither survive in a dangerous world nor can he advance a step further on the difficult road which leads to progress; secondly the tribal group is specially chosen by the Unknown to shower its favours in the form of victories on the battlefield and plenty of food from hunt and harvest. The sense of being chosen ones has tremendous significance in the outlook of the community; it creates a discipline and morale among the members of the tribal society; it makes it possible for the individual to merge his identity completely into the tribal community and to derive strength and relevance from that awareness and dedication; it gives meaning to life and a buoyant faith in all undertakings. It was this sense of being the chosen ones derived from and sustained by their fervent belief in myths and legends which made the children of Israel, the descendents of Woden and Thor, the sons of the Bharatas, the offspring of the god of fire and of many other powerful deities, accomplish heroic deeds and difficult tasks for bringing civilisation into existence. These chosen ones were the architects of empires in the valleys of the Indus and the Ganges, the Nile and the Euphrates and in the pleasant islands along the coast lines of the warm fertile lands bordering on the Mediterranean.

"In the midst of mystery and peril, and out of a heightened sense of imagination, tribal societies evolve their myths and legends which can be shared to strengthen tribal unity and to create and sustain a sense of comprehension and confidence."

Myth and legend in early society serve the functions which law and reason perform in modern communities. They embody the sanctions for obedience and right conduct and project the poetry of feeling and wonder. They are, however, born of the jungle, in the poignant struggle of the puny, helpless man against ferocious beasts and hostile elements and out of the awe-inspired by the mystery of mountains, skies and natural phenomena. As civilisation advances and the tribes coalesce into larger communities bound to particular parts of earth by the mode of agriculture, myths and legends are no longer sufficient to hold the community together, nor satisfying to the growing individual who needs a new kind of mental and spiritual integration. When this point of human development is reached, the stage is set for the appearance of universal religions centring round the idea of the one omnipotent God Discipline and morale holding the tribe together in a dangerous world are no longer enough. A rising civilisation needs a more universal ethical code which can quicken the pace of progress. The individual requires new explanations of the mystery of life in the context of the widening horizons of his mind and environment. The idea of God is a great leap forward in the mental development of humanity and it opens up infinite possibilities of progress.

the need for secularisation

Society can be organised on the basis of an ethical morality the sanction for which is derived from the Divinity. If the conventional arrangement of society into various classes and orders of people can be sustained and supported by ethical morality through a church or a priesthood, religion can be a great stabilishing force. Kings can assume the divine rights of ruling and the church can be the repository of all spiritual authority. The worship of God can draw the best out of human beings and lead to beautiful creations in art, architecture, poetry and literature. Individual leaders and groups are made capable of extremes of self-effacement and self-expression through religion. Whether the pursuit of God is used for living the life of love and servive or for excercising authority over other men, the results are tremendous. Such has been the influence of the great religions of humanity like Hinduism, Islam, Christianity and Judaism.

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From the primitive belief in myths and legends to the idea of God as embodied in a universal religion, it was a long step forward in History, but in both cases the sanction of the supernatural for all standards of behaviour and action remained. Progress merely demonstrated that the human outlook was thoroughly

imbued with the idea of the divine. The acceptance of a universal religion in a territorial society marked the emancipation of the individual from the narrow range and dark superstitions of tribal society. But new limitations were imposed in the course of time and the authority of church and state, of dogma and law became stifling. The dominant classes groping toward reason, freedom and culture felt the need for secularisation.

In all civilizations the transition from a spiritual to a secular order of things becomes necessary for the sake of individual freedom. In Europe the medieval order of society, based on the supremacy of the church universal and the divine idea which it embodied began to fade away with the changes which are collectively known as the Renaissance and the Reformation Movements. New classes of society became sufficiently strong to challenge the authority of the priest and the noble man. Modes of production changed and invited the play of free competition and innovation in place of the the authority of custom and tradition. The discovery of the new world and the growth of knowledge about the Earth and the planetary system in which the earth appeared like a midget changed radically the outlook of man on his environment and shattered old beliefs. But the profoundest change took place in the mind of man. Dogmatic theology could not continue to quench the thirst for knewledge and ascetcism could not suppress the love of life. An eager sense of curiosity and a keen sense of wonder suddenly burst upon the mind of man and from these seeds of freedom and creation germinated scientific knowledge, a new love of life and ever-growing pursuit of adventure. Man who was afraid of the Unknown and had taken shelter in myths, legends or religious faith, became free to rove in a world of boundless speculation and limitless possibilities. When this happened the ecclesiastical order of things began to give way to the secular, and individual freedom was established and asserted at least as an important goal of life.

"A rising civilisation needs a more universal ethical code which can quicken the pace of progress. The individual requires new explanations of the mystery of life in the context of the widening horizons of his mind and environment. The idea of God is a great leap forward in the mental development of humanity and it opens up infinite possibilities of progress.

refusal to look beyond reason

The Renaissance brought into existence a secular society, but the process of secularisation did not stop with it. It was indeed the starting point. The accumulation of wealth in the hands of small number of merchants and landlords produced a leisured class of cultured and educated people who carried forward the spirit of enquiry into the realms of Science and Reason. With such people individual liberty became a burning passion and philosophy the dearest of intellectual pursuits. These Rationalists heralded the Age of Reason and their worldly activities secularised the last vestiges of the old order of things. The study of Nature and Natural Philosophy cast a spell on the minds of the Rationalists who refused to look beyond reason or to accept the validity of any authority other than that of Reason. Scientific and material progress, humanitarianism democracy and persuasive writings in excellent prose were some of the results of Rationalism.

By the end of the 19th Century, Secularisation appeared to be a completed process. But the rapid progress of science brought great power to man for the exercise of which the moral stature, which Reason could confer was inadequate. A new romanticism arose to demand fresh myths and legends and to seek personal security in the rocks of faith in a world of terrible fluxes and futile drifts. The tribulations of democracy in politics brought the cult of force and the sway of tyranny into the open, and in the wake of Nazi militarism and fascist beliefs there followed an alarming drift towards the irrational. The cycle had taken a full turn. The tyranny of fascism and its barbaric deeds posed a threat to Freedom and Democracy and the racialist beliefs had to be fought and vanquished both on the field of battle and in the mind of man. It was in this phase of history that the idea of secularism was re-asserted and found a new relevance to the life and problems of a free Republic of India, rid of foreign rule and the shackles of British Imperialism which had exploited religion for maintaining its sway over poeple of many faiths and diverse ways of life.

In contemporary India

The Constitution of India, as amended by the 42nd Amendment of 1976, proclaims a Soverign, Socialist, Secular, democratic republic, and reinforces the concept of Fraternity by stressing further upon the unity and integrity of the nation. The original version of the Constitution adopted on 26 November 1949, contained no reference to Secularism and Socialism, evidently the experience of a quarter century of the operation of the Constitution led to this elaboration of the Solemn Preamble which described the nature and essence of the State.

"The discovery of the new world and the growth of knowledge about the Earth and the planetary system in which the earth appeared like a midget changed radically the outlook of man on his enviromnent and shattered old beliefs. But the profoundest change took place in the mind of man. Dogmatic theology could not continue to quench the thirst for knowledge and asceticism could not suppress the love of life. An eager sense of curiosity and a keen sense of wonder suddenly burst upon the mind of man and from these seeds of freedom and creation germinated scientific knowledge, a new love of life and ever-growing pursuit of adventure.

The decade that followed the 42nd Amendment of the Constitution revealed no spectacular efforts to

strengthen the Secular Character of the Republic. On the contrary centrifugal tendencies of the working of the polity and religious differences and dissensions gained strength, and the gap between though and action, intention and reality widened further. Some major problems of Secularism in contemporary India continue to loom large and for their solution we can draw upon the experience of the larger process of Secularisation in history as well as the newly emerging opportunities from Science, Technology, and the planetary order of Mankind calling for appropriate institutional structures and practice of human values accepted by all.

The Indian society of continental dimensions remains deeply religious in the traditional sense and it is easv to rouse religious fervour and passions against groups of different religious professions on highly sensitive issues, often exploited by political parties angling for votes from largely illiterate masses. There are no signs of the waning of religious fanaticism and caste divisions which inhibit the formation of a national identity of secular type shared by all.

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coexistence of diverse communities

It is true that the historic civilization and dominant culture of India manifest the quality of tolerance and friendly co-existence among diverse groups of many religions, castes, languages and localities. But mere co-existence of diverse communities and groups is not enough for building modern Society in pursuit of development, social justice and general welfare To forge a larger national unity, it is necessary to remove the religious divisions and social inhibitions which continue to hinder the emergence of a truly secular nation-hood, based upon the cultural roots of the past and the aspirations toward a future of justice, plenty, peace and humanism.

Secularism, like freedom, must be cherished and won by constant effort and vigilance on the part of the individual citizen and the organs of the functioning of the State and the Society. The secular spirit should enter our way of life and project that faith in Reason, Freedom, Fraternity and Humanism which was the most precious product of the quest of secularism in history. To this end we must deploy all the potentials of Education, Development and Democracy which can transform our traditional and largely static society into a modern and dynamic nation, capable of contributing to the making of the emerging global Society of Mankind and the new Man who can now take charge of his destiny.

In this process of transformation the civilization and culture of India must cherish its essence and its roots and remain essentially itself while learning from others and drawing upon the new opportunities and vistas of history. Such is the real challenge of Education and Development to our large continental society striving to be secular and democratic.

Among other things the idea of secularism in contemporary India aims primarily at new fusion of Hinduism and Islam for a true fraternity of peoples and practice of a common spirituality derived from the essence of religion and culture. Secular values are basically derived from a common culture into which many religious strands and experiences enter to enrich our cultural heritage.

I conclude these stray thoughts on secularism by recalling the following statement of Maulana Abul Kalam Azad in his presidential address to the Indian National Congress in 1940.

> "I am part of the indivisible unity that is Indian nationality. I am indispensible to this noble edifice and without me this splendid structure of India is incomplete. I am an essential element which has gone to build India. I can never surrender this claim"

To this secular concept of Indian nationality both Hindus and Moslems, along with other religious groups must contribute to forge a real and abiding unity from their many splendoured diversity of life and culture

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The challenge persists. Will there be an adequate response ?

The way to real secularism in India lies not through the wishing away of religion in actual life of the people, but by bringing its essence and spirit to a common way of life and a broad humanistic culture shared by all. This is mainly the domain of education in the larger sense of forming a common cultural identity and weaving many beautiful strands into a new and resplendent quality of life. This concern is sadly lacking in the current thinking and practising of education in the narrow grooves of past experience and pedagogical limitations. A broad cultural learning by a learning society consciously taking charge of its own destiny by all the modalities of participation in change and development is the key to a

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Secularism— a positive ideology for social change

Chitta Basu

In a thought provoking article, Shri Chitta Basu, a veteran parliamentarian, has presented a kaleidoscopic view of secularism. He has dwelt at length on the role of state in promoting and consolidating secular ideas. Quoting Dr. Radhakrishnan who said "that national integration can not be built by bricks and mortar, by chisel and hammer; it has to grow silently in the minds and hearts of men," Shri Basu stresses that secularism remains to be the only practical proposition in order to maintain stable equilibrium for the Indian state. He argues that economic factors play a vital role in the growth of secularism. The deterioration of the economic conditions of certain sections of the masses is being exploited by the fundamentalist elements for safeguarding their own interests. Referring to the struggle for independence, when majority and minority communities joined hands to bring the coloinial rule to an end, Shri Basu points out that people set aside their narrow sectarian barriers and parochial outlook. He asserts that patriotism and democracy demand that sustained efforts should be made to build secularism brick by brick, and the State must be a vigorous participant in this drive.

THE CONSTITUTION OF THE COUNTRY describes the state as Sovereign, Socialist, Secular and democratic. The expression 'Secular' has special significance in the context of the historical development of Indian Polity. Indeed, it is of pivotal importance particularly in the context of political realities on the ground as they exist now.

A Secular State as defined scientifically, means a State which recognises every citizen as equal and do not recognise any social or religious stratification vehicles for exercising political rights. But, what generally projected as secularism is 'tolerance of religions with special emphasis on the protection minorities and preservation of communal harmon This commonly understood meaning of Secularis falls far short of the scientific meaning of it. Tl

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essence of Secularism however rests on two basic principles;

(a) Separation of religion from politics.

(b) Acceptance of religion as purely and strictly private affairs of individuals having nothing to do with the State.

In short, the conceptual delinkage of religion from State constitutes the core of the philosophy of Secularism.

secularism : a rational concept

Acceptance of Secularism as mere 'toleration of all religions', denudes it of its real contents. Secularism is

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the doctrine of social change. It proposes to change the traditional concept of religion. It seeks to rid religions of their bigotries and demystify them. Secularism is a rational concept, born of rational and humanist development of the modern age with ever-widening frontiers of scientific and technological advances. It is, however, not anti-religion, on the contrary, secularism provides truly congenial social environments for the practices of true religion and saves it from th clutches of peddlers of religions and professional religionists.

Secularism does not also mean the assimilations of all religious cultures into one, but, creates conditions for the evolution of a new culture and civilisation transcending all prevailing conflicting religious cultures. What secularism seeks to oppose is the motivation of social action based on religion or theology.

In short, secularism, means the complete rejection of social identities based on religion and strict confinement of religion within the realm of individuals' affairs. In fact, Secularism is not an attribute of statecraftship but a positive ideology for social change.

Secularism is anti-dote to communalism in our country. Communalism in our country, historically analysing, manifests itself not only in the form of riots and social conflicts, but it is rooted in communal ideologies. Communal ideologies being ideologies have intellectual roots in the society. To fight back communalism, we need another alternative ideology to neutralise and ultimately triumph over the communal ideologies. Secularism provides such ideological weapons to fight communalism.

Let apart the ideological consideration, secularism remains to be the only practical proposition for stable equilibrium for the Indian State. Partition of the country on the communal basis, contributes to a considerable extent to the rise of majority communalism which, if not tempered with liberal political set up, might have logically led to the creation of a Hindu State in India, as a backlash consequence of Pakistan's Islamic State. The ethos of anti-imperialist freedom movement, however, had a sobering impact on the elite section of the majority which was the product of western education and social reforms, and blunted the edge of the aggressive majority communalism. Non-theocracy as the State character, was accepted as compromise between the 'hawks and doves' of the majority community. And the idea of non-theocracy found expression in the semantic of 'Secularism'. Secularism conceived as "toleration for all religions with emphasis on minority protection" got enshrined in the Constitution of the country. Indeed, this led to the dilution of secularism.

state to play a key role

The State, as the chief social institution, to regulate the social conflicts, has a key role to play to nourish the secular spirit and inculcate it into the mind of individuals of the society. Indian State, has failed to put into practice even this diluted secularism during the last four decade. A Secular state can function properly only in a secular society. The reality is that the Indian Society has not been adequately secularised. As a matter of fact, the contrary has happened and communalisation of the society has taken place rapidly during the last decades. This Communalisation has been the result of three major weaknesses of the States' Policy and performances. Firstly, the State does not actively fight communalism on the politico-ideological plane. Secondly, it accommodates, and concedes to the pressures of communal groupings, and does not fight back the politicisation of religious identities. Thirdly, communalisation of state apparatus-bureaucracy and other services especially at the regional and local level has increased rapidly. The past experiences lay it bare

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that although the Indian State is constitutionally secular in character, it has failed to secularise the society. There cannot be a secular state without society being fully secular.

Secularism is not an entity by itself. It can blossom in accompaniment with democracy, economic equality, social justices, true spirit of nationalism, deep faith in Indianness and federalism. In a multi-religious, multi-culture nation of India's size and diversities, secularism is the only integrating thread. Absence or destruction of it would invite disintegration. Secularism cannot be merely a gift of the Constitution, nor it can be the product of State directive principles alone. It is the

consummation of a nation-building process in the pursuit of a cherished national goal. Conscious mass efforts are the main inputs. Mass movements are the main and unfailing fountain source of the mass efforts. Need is to unleash the mass movements to make India truly secular, by secularising the society, as opposed to the growing trend of communalisation.

Secularism remains to be the principal vehicle of national integration. It is relevant to remember what Late Dr. S. Radhakrishnan the former President of India said. He said, "National integration cannot be built by bricks and mortar, by chisel and hammer. It has to grow silently in the minds and hearts of men. The only process is the process of education. This may be a slow process but it is a steady and permanent one."

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significance of economic factors

The success of sustained efforts to secularise society depends much upon the economic factors. The views of Pandit Nehru, in this respect, are particularly relevant and significant in the present context. He said, "The real thing to my mind is the economic factor. If we lay stress on this and divert public attention to it, we shall find automatically that religious differences recedes into the background and common bond unites different groups."

The role of economic factors, in the aggravation of communal situation, has been very sharply pointed out in the declaration of National Convention against communalism and separatism. (New Delhi, October 12, 1987). It stated, "With the deteriorating economic situation, this problem (communalism) is getting further aggravated. Minorities have to bear brunt of this accentuation of misery. This combined with the aggressive posture of majority communalism, accentuates the sense of alienation among the people belonging to the Muslim minority which is being exploited by the forces of Muslim fundamentalism interested in keeping the Muslim masses isolated from the national mainstream. Therefore, the main problem of overcoming the influence of communalism is that of reforging Hindu-Muslim unity. For this it is necessary to sympathetically look into the genuine grievances of the minorities, while promoting the ideas of secularism."

Voices are being heard now, raising the demand for doing away with the term 'minority' There should not be any mention about minority in the Constitution, they say. This, they say, would promote national integration. They demand that State should not encourage 'minoritism' as they call it. This is undoubtedly a manifestation of the ideology of aggressive majority communalism, as forewarned by Nehru. He said, "the danger to India is not communism. It is Hindu Right wing communalism." (Y.D. Gundevia, Mainstream. Jan 9, 1988).

First, let us know, 'minorities' are realities in Indian political scene which can be ignored only at the peril of disintegration. Secondly protection of minority-interests is one of the hall marks of a civilised society. For democracy, it must be the first charge on the society. Protection of minority interests must be considered as protective discrimination in favour of minorities, which is not opposed to equality. In fact, this is needed to create the climate for equality.

A demand has been raised for banning all communal political organisations. But this is not the surest way of curbing communalism. This may be counter productive also. Nehru expressed himself on the matter. It would be relevant to take note of it. He said, "The history of the world shows that repression and coercion are the surest methods of rousing the resentment of a minority."

Secularisation process involves the restructuring of the socio-economic set-up. But it has not been changed in such manner as may knock out the basis of caste divisions and communalism. On the contrary, the existing structures are not only being assiduously retained, but further strengthened. Economic factor is related with the concept of secularism in as much as a secular state guarantees equal opportunity and rights for all regardless of religious faith.

Together with the economic factors, patriotism and commitment to nationalism, promotes, nourishes and strengthens the spirit of secularism. The Indian National Army formed by Netaji Subhas Chandra Bose which displayed uncommon courage and commitment to the cause of India's freedom continues to remain a shining example of Hindu-Muslim-Sikh unity and Indian Secularism in practice. Patriotism and nationalism were the main driving forces behind it.

Secularism cannot be merely a gift of the Constitution, nor it can be the product of State directive principles alone. It is the consummation of a nation-building process in the pursuit of a cherished national goal. Conscious mass efforts are the main inputs. Mass movements are the main and unfailing fountain source of the mass efforts."

fostering a sense of oneness

An appraisal of the history of the anti-imperialist freedom movement reveals that during the struggle for independence the national movement set into motion the process of liberating the people from narrow, sectarian barriers and parochial outlook, by instilling a sense of oneness of being Indian, irrespective of differences in caste, creed and religion. It is a calamity that the process, instead of being accelerated, has been thwarted and some times, reversed, during the last forty years. Powerful vested interests, determined to disrupt

Architects of Indian secularism

Mohit Sen

Although secularism as a phrase seems to have entered recently in our parlance, the core of its concept, has remained a part of our history since long. It is evident in the edicts of Ashoka, in the firmans of Akbar, and in the Bhakti movement launched by Kabir, says Shri Mohit Sen, a well-known political thinker. Giving illustrations from the writings of Raja Ram Mohan Roy, Rabindra Nath Tagore, Aurobindo Ghosh, Mahatma Gandhi and Jawaharlal Nehru, the author has attempted to bring the point home that secular ideas have not only been preached but practised by the leaders of our mass movements. With the passage of time, there has taken place a fusion of religions. He emphasises that both Hinduism and Islam, although being different in form and rituals, have over the ages, contributed towards the growth of the composite Indian culture, which is unique in character. The author asserts that secularism is not an anti-thesis of religions, rather it reinforces them as all religions direct their followers to uphold the principles of love, justice, tolerance and respect for each other.

SECULARISM CAME EARLY IN OUR HISTORY. It was a distinct presence in the edicts of Ashoka. It was one of the great achievements of Akbar. At the level of direct mass involvement it was at the heart of the great Bhakti movement of the sixteenth and seventeenth centuries. Since religion was in those times the only available ideological form, our secularism was also expressed in religious terms and it is this religion based secularism which is its essential and indispensable ingredient today as well.

It was a sense of this feature of India's history that led Gandhiji to state once that Kabir had done more for the modernisation of India than Raja Ram Mohan Roy. This made Rabindranath Tagore protest angrily. But the truth was on Gandhiji's side as far as the masses were concerned, though Tagore was also right in upholding Raja Ram Mohan Roy's place as the first intellectual moderniser of India.

secularism is not sectarian

In any event when the communalists of our country try to make secularism to be something alien to our tradition since the latter is a deeply religious one, they misinterpret our religions. (Hinduism has an almost unique quality of development through absorption, though it has its history of intolerance as well especially in the case of Buddhism. Islam in India is too readily identified with Mehmud Ghazni and Aurangzeb but its mainstream was one of adjusting to and helping the growth of the composite culture of our civilisation. Islam was not only

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Indianised but it contributed to the Indianness of India.)

All this is sometimes lightly brushed as just religious toleration. It is, ofcourse, also that. And it is also of great importance because of that. Without religious tolerance there can be no secularism, particularly in India. Separation of religion from the State is indispensable for secularism but separation from religion is not.

India's modern history, unfortunately, is made to appear as colonial history. In essence, however, it is the history of the making of India as a nation of which the freedom struggle and the consolidation of the nation state are the two most important stages. It is this effort

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that makes our modern history a secular one. The colonial state, in fact, was a theocratic one. It was clearly a Christian state and from at least the first years of the present century one of the main aims of its policy was to promote communalism and instigate communal riots.

From its inception our freedom struggle was secular. Its leadership made conscious efforts to promote national consciousness going beyond religion but based on religious toleration. This was not too much of a problem so long as the leadership of the movement was confined to the upper middle class westernised intelligentsia.

mass appeal of the movement

The problem arose when the movement spread to the masses and when into the leadership came new segments of the intelligentsia, more traditional and less affluent. Tilak attempted a new method and new outlook for nationalism. So did Aurobindo Ghosh. It was neither reactionary nor communal but it did present our tradition as Hindu and did try to mould national consciousness along Hindu lines. Other religions were to be tolerated but Indianness was regarded as essentially Hindu. It was in line with what Vivekananda propagated as well. Its positive aspect was the stimulation of national pride but it left a great deal out of what was to be considered as Indian. It had mass appeal and efforts were made to draw the Muslims into the celebrations of the festivals. But it was the attempt to draw them into something which was not their own.

It was at this point of time that two great master spirits appeared on the scene, testifying to the endless vitality and fecundity of our civilisation. These were, of course, Gandhiji and Rabindranath Tagore.

Gandhiji took over from Tilak the drive to make our nationalism and our national movements a mass based one. But while remaining a devout Hindu he made his message a composite one, much along the lines of the Bhakti saints. "Ram Rahim tere naam" was something that only they had said earlier. This was now to be the national answer to the colonialist rule which sought to deprive us of our identity and break us up by fostering communal division. Gandhiji proved that an Indian mass movement could be developed which did not have to be Hindu in outlook in order to attract Hindus in their millions.

It is utterly wrong to say that Gandhiji alienated the Muslims. It was to him and his movement that Khan Abdul Gaffar Khan, Maulana Abdul Kalam Azad, G.M Syed and thousands of devout Muslim intellectuals were drawn along with vast Muslim masses.

Gandhiji's great contribution was to secularise the mass mind and psychology of our country. It is for this reason, among others, that he fully deserves the title of Father of the Nation.

In fact, Gandhiji went beyond not just Hinduism but religion itself. The objective, programmes, actions, and resolutions of the Congress which he led were entirely secular in character. He was the greatest secular nationalist leader of our times who was not only deeply religious but whose religion was part of his public presence as well and vast number of his followers were deeply religious.

Moreover, it was the Mahatma who is on record as saying that he once used to say that God Is Truth but when he found atheists as much votaries of truth as himself he changed this to Truth Is God. This was a shift from religion to science while retaining the spirituality of the former.

When we remember Tagore there is so much to remember but a dominant memory would be that of secular spirituality which was abstract in conception

"The colonial state, in fact, was a theocratic one. It was clearly a Christian state and from at least the first years of the present century one of the main aims of its policy was to promote communalism and instigate communal riots."

even Upanishadic but rich in concrete imagery and evocation. He secularised religion by making it a matter of earth, river, sky and human emotion. He concretised it further by drawing it into the then current problem of national rebirth. He was a fusion of Ram Mohan Roy and Kabir. The forms of action that he popularised like the rakhi bandhan and *prabhat pheris,* had this same dialectical unity about them.

It is quite in the fitness of things that both Gandhiji and Nehru drew sustenance from him with Indira Gandhi being sent to Shantiniketan with the approval of both. Ekla Chalo Re was one of Mahatma's favourite hymns while Nehru's sensibility was shaped by the songs and poems of the great master as well as intellectually influenced by Tagore's prophetic prose writings.

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Secularism —hope of our survival

Dr. Mohammad Hasan

Religion is born out of faith and admits of no change, while science is based on reason, and knows its limitations, expounds Prof. Hasan, a noted academician and a scholar of standing from JNU. In a keen critical analysis of the events taking place in the country, the author tells that the social fabric of the composite culture, woven by leading lights of all communities, over a period of centuries, is now under great strain. His argument is that after liberation from foreign rule, we got immensely engaged in the process of industrialisation and other developmental activities, which gave us little time to shake off the burden of superstitions, blind faith and bigotry, from our shoulders. For a country like India, the author asserts, secularism is not an academic question to be discussed and debated by intellectuals; it is the only hope of our survival. It is secularism alone that can emancipate a developing country, eager to accelerate the pace of progress, from the shackles of fundamentalism, concludes Prof. Hasan.

OURS IS AN AGE OF SPECIALISATIONS and hair-splittings. Intellectuals and politicians vie with each other in giving their own interpretation to innocent, simple and even categorical terms, sometimes by tearing them apart from their conceptual context imposing upon these terms their individual prejudices and arrogance by using them in just the opposite of what they were meant for. One great victim of such hair-splittings and jugglery is the word 'secularism'. The term stems from the word 'seculum' which is a Latin word used in connection with those priests and Christian monks who used to live in urban areas leading mundane life in contradistinction with monks living in monastries. The term, thus, assumed a new connotation in course of time.

The Encyclopaedia Americana explains it as a moral code with ethical laws distinct from metaphysical or religious connotations and mentions its three important components (i) liberty for every individual to think independently without any compulsions; (ii), the right to differ from others; and (iii), freedom to express doubts or hold unusual opinions about God or other metaphysical matters.

The term was used in 1780 by George I Holiyok, a teacher in a mechanical institute in Birmingham, and a colleague of Robert Owen. Hence, soon afterwards the term began to be used to connote five important ideas; The rule of reason, (ii) separation of ethics from religion, (iii), concept of knowledge as product of reason, not faith, (iv) liberty of expression and (v),

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participation in the struggle for making the universe a better place to live in.

This, in short, was the beginning of the concept of secularism. But soon it assumed another dimension. Academic niceties apart, secularism now simply means separation of state apparatus from the control of religion and this separation has been achieved through incessant struggle of the entire mankind. Finally it culminated in affecting the liberation of state (administration, legislation, judiciary and press) from the control of religious authorities and upholding the rule of law based on the principles of natural justice irrespective of religious beliefs of citizens who may be in majority or in minority in the country concerned.

"Religions are born of faith and do not admit of any change and claim to be universally valid for all times to come. In contradistinction with religion, Science bases itself on reason and admits its limitations."

Religions are born of faith and do not admit of any change and claim to be universally valid for all times to come. In contradistinction with religion, Science bases itself on reason and admits its limitations. Guided mainly by reason, it can depend only on such facts within rational purview which can be at times erroneous and may be corrected. It also admits that practically all its judgements and reasonings are subject to change.

feudal patronage of religion

Religion, however, is based on beliefs and commanded unquestioned respect with claims to remain valid for all times to come. In feudal times, monarchy was the ruling political system, and when rule of law was subject to the personal whims of the monarch, religions used to control those whims of the ruling monarch by imposing some sort of religious or ethical discipline upon the monarchy. But this finally resulted into a dual relationship. Religion and religious control of State through monarchical, mundane and ecclesiastical authorities was the idiom of feudalism and it cut it both ways. It could check the monarch from making ethically erroneous decision which could destroy the very basis of society; but if the monarch was strong enough he could resist the challenge of the ecclesiastical priests or the religious leaders and could impose his own will upon these leaders thus compelling them to give religious or ecclesiastcial justification or respectability to his decision so as to combine political tyranny with the religious authority of the times. During the French Revolution and Restoration in the West, the separation of religion from politics was affected. It was in a way, the result of steady growth of industrialisation in the West coupled with the development of scientific thought. This process of industrialisation and development of scientific thought did not take place in countries outside Europe, Quite a number of underdeveloped countries which were liberated from foreign rule after centuries of political struggle were unable to shake off the feudal past enshrined in the form of religious dogma and superstition. While busy in industrialising themselves they were not free from the religious influences and that is why perhaps, from Iran to Indonesia some sort of religious revival or opposition to secularism is visible even now.

supremacy of science over dogma

In India, secularism is not altogether an academic problem, it is real issue, something which vitally concerns the development of Indian society. Firstly, because secularism means the supremacy of sicence upon all sorts of dogmas or all sorts of blind faith. Secondly, because secularism means that no religion or no religious authority will control political decisions of the state. State and religion should be two separate entities and one should not be influenced by the other. This may seem to be rather strange proposition and we have not yet been able to fully abide by it or fully work it out during the last 40 years. The only saving grace is that the Constitution of India is secular in spirit and it fairly admits of secular goals. Unfortunately, secularism has not been practised in everyday life as it should have been. Often challenges to the very concept of secularism emanate from different quarters. Nevertheless secularism means that state apparatus should be governed not by religious considerations of any community or religious group and its endeavour to dominate others simply by associating its politics with its religion. This also necessitates the reshaping of the Indian ethos in the secular mould. This has unfortunately not been done. This does not mean that secularism be taken to mean equal respect to every religion of the land. If a person, holding any office of the state publicly pays respect to various religious rituals he flouts the very norm of secularsim. All leaders of state and important office bearers of the Government of India, should steer clear of all such religious involvement as long as they are in the Government. Of course, they are free to hold any religious belief they want to subscribe to but their political personalities and their office should be free from all religious bias.

"Quite a number of underdeveloped countries which were liberated from foreign rule after centuries of political struggle were unable to shake off the feudal past enshrined in the form of religious dogma and superstition."

Unfortunately, we have been a victim of all sorts of religious pressures. It is understandable because our society is still a feudal society and we have not yet been able to industrialise ourselves with the result that the backlog of bygone days is still with us and we are often constrained to play the gallery, to appease religious susceptibilities of various religious groups. In fact, it should be clearly borne in mind that secularism is neither atheism nor acceptance of all religions as the gospel truth and thus paying respect to them publicly. Secularism only means that not only all state decision but all state activities should be free from religious

fluences and impact, which means the substitution of religious influences by ethical and moral considerations and that all Indian citizens should be equal before law. Unfortunately, there has been a trend towards opposite direction and religious revivalism and communal conservatism has been re-emerging as a potent force. Even religious rituals, myths or conservative ceremonies of a particular religion are being shown in Government controlled mass media an activity which is contrary to our secular ideals. This focuses attention of millions of our viewers and glorifies blind faith and the bygone religious traditions. This will focus attention towards religious bigotry and will bring to mind of millions glorification of the past thus resulting in negating the

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very aims and objectives which a secular society should hold dear.

glorification of the past

If we idealise the several thousand year old civilisation, naturally a viewer, inspired by the glorification of the past, will also try to rationalise the various legal and judicial systems of that period, for instance Sati, and the opposition to the adoption of a common civil code. All these activities will lead to the debunking of our secular ideals.

This has been happening elsewhere also, particularly in our neighbouring countries When we analyse a particular religion or give impetus to various religious practices, the usual result is that the entire community takes to glorification of past ideals and instead of thinking in terms of reason, tries to rationalise everything which comes to their mind through beliefs and religious traditions. If we are to address ourselves to industrial development, we will have to inculcate a scientific temper and this is possible only if secularism is practised not as an aggregate of respect to all religions but as strict adherence to the principle of separating state apparatus from all religious influences. This lack of secular understanding or conceptual misconceptions have resulted in the distortion of the national psyche. As someone rightly pointed out, we are the only country in the world to give ourselves two different names in our Constitution— India that is Bharat. Perhaps we mean to highlight modern scientific and secular approach by our first nomenclature and our ancient, conservative neo-religious ethos by the other, resulting into our divided national personality and giving adequate anti-secular forces to play havoc with our sensibility. In fact, every effort is being made to encourage blind faith in superstition and to strengthen the hold of conservatism and non-secular approach on our state apparatus as well as on our people.

To quote, at some length, from, Justice. O. Chinnappa Reddy's Bertrand Russel Memoral Lecture:

> "I do not have to tell you how All India Radio begins the day with Suprabhatam' and how Doordarshan publicises yoga and how the two .. project the decadent revivalist philosophy of the pseudo-intellectuals. The vast majority of the intellectuals.. (have) become apostles and minstrels of revivalism to sing and chant the glories of our great, ancient culture and heritage. Evidence is discovered by them... to prove that our ancients possessed scientific knowledge. ... Quite absurd researches are undertaken to discover ancient insingts into modern discoveries .. All this.. to create a false, irrational consciousness in the minds the people *weaning them away from real rational consciousness* (emphasis added). Without drawing parallels one is reminded of Nazi medical scientists of Hitler's Germany, who tried to prove the superiority of the Aryan to the Jewish race and the innate physical diseases which no Jew could escape."
>
> mimeograph P 11
> Oct 1983 lecture

This distortion of secularism clothes the adoption of majority religion and its concepts as nationalism and the nationalist outlook and rejects all other variations as treacherous or anti-national, thus creating justification for adopting of a new definition of secularism being nothing more than showing equal respect to different religions.

compartmentalisation of culture

This has resulted in distorting our sense of history. Instead of taking pride in our justifiably glorious past,

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"The secular social fabric of Indian Society is currently under very great strain. All minority groups under garb of defence-mechanism, are resorting to various types of revivalism and fundamentalism and the very edifice of our glorious composite culture built by various communities of Indian citizens over a period of centuries is being torn asunder.

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now secular approach has divided the continuum of Indian history into compartments of communal heroes and defenders of various religious communities.

Again, this abandonment of secularism has vitiated the very idea of justice and equity in our social set, up. If a person kills another or abducts a woman of his own community, he may be treated as criminal but shall be deemed a hero if the victim belongs to community different from his own.

All these happenings are, of course, not without their chain reaction. The secular social fabric of Indian

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Secularism : constitutional and real

Kamal Nayan Kabra

Probing deep into the question why secularism is a necessity for us, the author points out certain weaknesses and lacunae' which were not visualised by the fathers of our constitution. He says a constitutional ban on political formations based on religious identity, issues and appeal could have given a positive content to constitutional secularism as also fortified the Indian polity against a serious malaise. That the State does not fly the flag of any religion, logically and practically leads to a position in which it does not allow political formations based on a discarded principle of public life. Absence of such a provision meant that an immanent threat to secularism was left intact. Secularism minus a powerful, in-built secularisation process as an inherent element of our polity was the constitutional baggage with which we began our march for building up a secular society.'

SECULARISM IS ONE OF THOSE BASIC TENETS of harmonious social life which the fathers of Indian Constitution adopted as a framework in which a cohesive development may be smoothly pursued. It was necessitated on account of many features of Indian reality like its vast size, religious, cultural, ethnic and linguistic diversity, strong roots of local, religious and cultural factors in the psyche of the people, uneven strength of various groups in terms of numbers, economic and social powers and access to sources of wellbeing, etc. The long period of British colonial rule saw how people can not only be divided on communal lines against their own basic interests but can also be brutalised and dehumanised, violating the basic values upheld dearly for centuries.

a necessity for us !

A secular polity was also needed to make democracy work and feed the forces of national unity and integration. Given the religious composition of India, adoption of universal adult suffrage-based multi-party democracy in the context of sharpened religious identity and mobilisation (which made liberal 'use' of distorted history, mis-interpretation of religous tenets and misdirected articulation of concrete interests) was portrayed and perceived as a perilous path for the future of the religious minorities, if secularism was not made a basic, integral part of it. On the other hand, the price paid for successfully negotiating the transfer of power in the form of the partition of the country was viewed and propagated by a growing communal virus planted by the British in our soil as the wages of appeasing a vocal and organised 'minority'. Thus the nationalist leadership which successfully led the freedom movement foresightedly considered it imperative to enshrine secularism as a cardinal principle of Indian Polity. It was meant to be a firm rejection of things like the two-nations theory, politics based on religious separatism, diffusion of the national identity on the basis of religious revivalism and determination of socio-political issues on the basis of religious precepts and identity.

secularism constitutional

This 'Constitutional Secularism', a powerful pillar of

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emergent Indian nationalism and humanism, is essentially a formal, juridical arrangement which has to be lived, translated into social practices and become an inalienable element of the dominant value system. The constitutional secularism is a necessary condition for the flowering of 'social secularism' as a part and parcel of Indian social reality. Before examining the operationalisation of secularism in the form of social secularism, it may be useful to examine some salient features of constitutional secularism.

Since India is declared a Secular State, no religion is placed on the pedestal of State religion. This ensures constitutional equality of each religion. Then, the Constitution stamps out discrimination based on religion. It also provides for freedom to profess practice and propagate one's religion through legitimate means. Special care has been taken to make provisions for protecting various rights of religious minorities, lest they be swamped by, or even entertain such fears of the 'might' of the 'majority'.

"It (secularism) was meant to be a firm rejection of things like the two-nations theory, politics based on religious separatism, diffusion of the national identity on the basis of religious revivalism and determination of socio-polititical issues on the basis of religious precepts and identity"

There are some other provisions in the Constitution which impinge directly or indirectly on various religious issues. Hence they too contribute to the content of constitutional secularism. Removal of untouchability, preferential discrimination in favour of certain specified Hindu and Sikh castes with a view to enabling them to overcome certain age-old disabilities, state's responsibility to ensure proper management of religious shrines and properties, directive on protection of milch-cow, etc. have their roots in India's religious landscape and the need to make them consistent with new realities and ethos. It is difficult to judge what kind of signals did these provisions give to the different sections of society. However, it may be inferred that the constitution neither turns its back on religions nor adopts a stance of a passive onlooker on such matters.It seeks to adopt a cautious, non-discriminatory approach which is consistant with the value-premises of the Constitution and may be considered an equi-distant approach.

How did this neutral, non-discriminatory, hands-off approach towards religious affairs actually unfold itself in the course of the working of India's democratic polity over the last four decades ? Since a constitution may adopt values ahead of their actual deep seeping into the consciousness and behaviour pattern of the people who give this constitution to themselves, one has to see how far this gulf has been bridged and the values adopted have become the actual, operationally relevant values. The major preoccupation of the State has been the pursuit of 'economic' development, which was also expected over time to facilitate the emergence of a secular ethos and, in its turn, derive strength from such an ethos. It may be worthwhile to probe the actual course of this relationship. That is to say, the working of democratic institutions and the path and pattern of development may be considered the major influences for translating the ideals of constitustional secularism into actual social secularism. This mechanism becomes all the more relevant as there was little direct positive content in the constitutional secularism capable of sustaining secularisation. A legal document can perhaps do little else or more: basically it stipulates what the State must desist from in order to keep its secular credentials bright and unsuspect.

constitutional lapses

The positive action needed for breathing life into the abstract secular ideals is a matter for State policies and actions, specially in areas like educational, science and cultural policies, as also the mobilisation by and platform of various political and cultural formations. Ideally, the constitution should probably indicate or prescribe the broad principles and guidelines regarding the areas and manner of positive thrust essential for giving life and blood to the legal principles of secularism, which help develop a common identity as citizens of one nation-state in a society with such a great deal of diversity, ignorance and poverty. The Constitution made little positive contribution to the clarification of the concept of secularism except proscribing some blatant forms of anti-secular, theological structures and processes and did not succumb to the temptation of pandering to the religious sentiments in their raw.

It represented a significant step in the evolution of Inidan society in as much as a powerful vestigial hurdle of medievalism was crossed. However, some features of constitutional secularism like making scheduled castes citizen to forgo the benefits of reservation on conversion to another religion tend to weaken its non-discriminatory character.

"Since India is declared a Secular State. no religion is placed on the pedestal of State religion. This ensures constitutional equality of each religion. Then, the Constitution stamps out discrimination based on religion."

secularism left unguarded

Given the disparate numerical strength of various religions, persistent strength of religious appeal and constitutional framework of democratic freedoms, political and social mobilisation based on an appeal to religious identities and issues may carry the long-term danger of either emptying secularism of its content or even destroying it. On the days following the assassination of Mahatma Gandhi, this danger should not have appeared too far-fetched. A constitutional ban on political formations based on religious identity, issues and appeal could have given a positive content to constitutional secularism as also fortified the Indian polity against a serious malaise. That the State does not fly the flag of any religion, logically and practically leads to a position in which it does not allow political formations based on a discarded principle of public life.

Absence of such a provision meant that an immanent threat to secularism was left intact. Secularism, minus a powerful, in-built secularisation process as an inherent element of our polity was the constitutional baggage with which we began our march for building up a secular society.

Now the really critical question is: how far and by what means have we converted the constitutional secularism into social secularism; what, if any, festering sores of anti-secular, backward-looking ideologies, organisations and practices still plague our public life? And, most crucial of all, are the conditions now more helpful to the creation of a polity independent of or

"...it may be inferred that the constitution neither turns its back on religions nor adopts a stance of a passive onlooker on such matters. It seeks to adopt a cautious, non-discriminatory approach which is consistent with the value-premises of the constitution and may be considered an equi-distant approach."

unconcerned with ecclesiastic or religious matters than was the case when we gave the Constitution to ourselves? This is not a question of being anti-religious, ignoring or hurting sentiments, emotions, values and practices which people have cherished for centuries. They have their place. Nor is it a question of discarding morals, following crass materialism, or slamming the doors on our common moral, spiritual and cultural heritage. The question is whether we have moved towards making our common, shared public and political life based on common human and nationalistic values, leaving various groups, subgroups, (ethnic, linguistic and religious) to follow their diverse values, morals and practices in their individual or purely group-confined activities, without mixing them up with common tasks, pursuits and values, without stepping on each other's toes, sensibilities and susceptibilities. Pursuit of such secular goals by instituting specific secularisation processes in the sphere of and as a part of political, educational, cultural and developmental activities in a democratic framework would have cemented the bonds of empathy among the people, evolving a common identity with respect to national material interests and appreciation of each others cultural experiences. In other words, we would have moved relatively closer to national integration, without sacrificing our specificities in many different dimensions. Are we or are we not on such a secular, progressive path even though roadblocks and ditches may wobble us and blind-alleys may momentarily turn us back?

this growing fundamentalism!

It is a difficult question to answer, particularly in a brief exercise of the present kind. However, one can see a disturbingly large increase in the number of anti-secular tendencies. Many religion-based political parties and groups have improved their political clout though, luckily, without being dominant or decisive. Now they are relatively more strident and militant. This is reflected in the growth of religious fundamentalism. This has unnerved some secular forces, making them prone to opportunistic compromises when the chips are down. The dangers posed by these trends to our national integrity and unity are ominous. There seems to have come about in the perception of the masses a discounting of the secular image of the Government. Social forces committed to secular polity and values are not as strong as four decades of the working of a secular constitution should have made them. They are often seen to be on the defensive. Many sporadic and some fairly sustained threats to secularism seem to erupt and persist, creating a vicious circle of fear, distrust and hatred—a situation to gladden the communalists.

Forces wedded to secularism are facing an uphill task. The secular credentials of the state, even the understanding of the nature and philosophy of secularism, seem to have taken a severe beating. Where are the forces with an unblemished track record of secularism? It is true that secularism means respect for all religions and, in particular, a genuine rather than tactical respect for the religion of the others. It is also not anti-religious. But the state structure and processes being areligious or independent of religious underpinnings, colours and overtones is not the same thing as being scornful of religions or anti-religious. Organised religion stepping out of its natural boundaries and interfering and disrupting other relatively autonomous spheres cannot be defended in the name of religious rights. All it means is that in a democracy the state keeps clear of all religious trappings. Public education concerns itself with universal, non-controversial morals and values and steers clear of their specific origins and strong associations with specific creeds and sects, sectional sainsts and seers. But the compulsions of competitive, short-sighted politics seem to be turning these ideals

"The major preoccupation of the State has been the pursuit of 'economic' development, which was also expected overtime to facilitate the emerence of a secular ethos and, in its turn, derive strength from such an ethos".

into multiple theocracy. Since exactly equal weights to all religions are too hard to be given and even harder to be perceived as such, multiple theocracy gives rise to communal feelings. That there is no state religion seems to be taken to mean that every religion is State's religion. It participates—through its leaders and public functions— in multiple religious activities which find a prominent play up on the public media.

threat to secularism

At the level of electoral politics; at the level of meeting the challenge of facing the movements unleashed by religious fanatics; in the form of treating people not as Indians but as Hindus, Muslims, Sikhs, Christians, etc.; in the form of interpreting history in communal terms; in the form of communalisation of

various organs of the State leading to the protectors themselves turing into wolves; in the form of deciding matters of international politics and diplomacy with an eye on the religious soft corner of various communities, one can find innumerable manifestations of a weak, defensive, confused and retreating secularism. To the extent a criminal is not taken as an individual deviant but his/her sins are visited upon the religions community to which he/she may belong and the law is taken into one's hands to punish those who are unilaterally declared guilty, we often violate the secular and humanistic values. Some of these events, processes and features display the weakening of the conditions for the success of the battle for secularism.

"The positive action needed for breathing life into the abstract secular ideals is a matter for State policies and actions, specially in areas like educational, science and cultural policies, as also the mobilisation by and platform of various political and cultural formations.

the saving grace

This is not to ignore many positive and heart-warming features and forces which often and decisively assert themselves in favour of secularism. Not only the growing revulsion against and sharper and widely shared understanding of the communal virus but also decisive proofs of communal amity (as in the case of strife-torn Punjab for the last several years) and secular sanity (like over 'Tamas') and decisive and repeated electoral defeats of the anti-secular, communal forces, particularly in the rural areas (which also see comparatively much less communal violence as compared to the cities) show deep roots and strong objective basis of secularism in India. The fact that autocratic and theocratic medieval India prior to the colonial rule was so singularly free of communal strife and frenzy and an overwhelmingly large majority of the rulers left their subjects alone with their religion and faith and Indian multi-religious village communities and urban centres were closely interwoven economic and social communities may be taken to show that secularism in its essential, positive aspects is not an alien grafting on the Indian soil. To treat this secularism as a gift of the so-called Westernising elite and ruling strata which has to percolate from the top to the bottom is to display one's mimetic, borrowed understanding of the Indian social reality. Modern nation-state may be relatively new, but that has more to do with the economic basis and level of development of science and technology.

why communalism ?

From the foregoing, the trillion rupee question that emerges is: why is it that even after four decades of the bundling off of the British colonialism and widely acclaimed acceptance of secularism, the dangerous legacy of communalism seems to persist and prevent the plant of secularism from flourishing ? Who are the local votaries of communalism who are acting as enemies of a secular India ? It also implies that various processes of social change, economic development, political awakening and overall transformation which have been initiated in the wake of independence could not adequately and correctly size up and face the challenge of translating our constitutional secularism into vibrant social reality.

the weaknesses

The erosion of the strength of secularism has to be seen in the context of its determined defence and improved appreciation of its relevance and content. The attacks on it are basically the handiwork of small and scattered pockets of vested interests. They resort to mob violence and carry on their virulent campaigns holding the great bulk of our people to ransom, partly through their fanatic persistence, partly owing to confused policies and weak-kneed administration and partly owing to the backing of some economic interests. The weaknesses of our constitutional secularism, as discussed above, have prevented adequate secularisation of the state processes, governmental activities and social outlook. It is one thing to enter some lofty principles in the Constitution and quite another to clearly define them, specify the processes and modalities for their implementation and counter the forces opposed to them.

We seem to have put too much faith on the indirect, long-term positive effects which economic growth is expected to produce on social relations, consciousness, cultural and political development and through them secularise our polity and society. This approach tended to consider a secular world-view as a derivative of modernisation in which powerful, westernised elite and leaders of modern industry and trade take the lead and make it percolate down among the masses. This process is supposed to help the people overcome their ignorance, traditionalism and narrowmindedness. This reductionist "cultural trickle-down"— (a counterpart of poverty-alleviating trickle-down)— often considered traditional religions as obstacles to progress and set their store by the 'technocratic-rationalist' approach which would bring higher standard of living, education, modern scientific knowledge and secular enlightenment to the masses.

"A constitutional ban on political formations based on religious identity, issues and appeal could have given a positive content to constitutional secularism as also fortified the Indian polity against a serious malaise."

It was an approach opposed to the idealistic, revivalistic one. To this extent it removed a serious threat to secularisation. But it did not care to set in motion independently in their own right, specific policies, institutions and social-cultural forces for building secular consciousness and social relations.

Partly their approach was based on the strategy of completing various transitions one after the other in a sequence. Thus the one-sided priority to economic (industrial and technological) transition came up, in course of time, against forces which started slowing-down and distorting economic growth itself, let alone lead to gradual evolution of a secular and scientific temper.

why secularism for us?

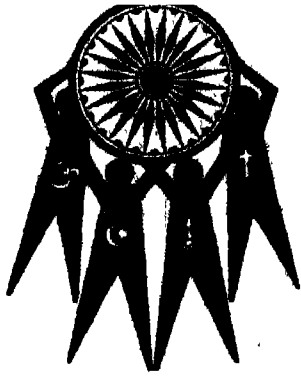
Such views were mistaken in many respects. In so far as the Indians are generally religious, they are not ipso facto communal or non-secular. Historically, modern economic growth has neither diminished religiosity nor encouraged an overall secular outlook as can be inferred from the resurgence of fundamentalism and cult-movements across the globe. India did not represent an unwitting divide between an imposed or imitative secular polity and an inherited and operationally relevant non-or anti-secular society. The objective need for secularism arose in the context of post independence imperative to build a new prosperous and progressive India. In India the political power, consciousness, behaviour, movements and articulation had their roots largely outside the religious sphere. Morever, the composite, wide-based freedom movement, labour and peasant movements and spread of progressive ideas significantly weakened tendencies towards the merger of the political sphere with the religious one. The problem was that with democracy and one-person one-vote some vested interests raised the spectre of political power passing into the hands of numerically the largest religious groups. By statutorily delinking religion and politics, such fears could have been allayed, We did so delink the *state* from religion, but we did not go far enough to delink *politics* from religion. The issue of religion-based politics or politics unconcerned with religions remains a moot and open issue. We postulated that economic growth, industrialisation, education, particularly scientific and technical education, and inculcation of Western ideas and attitudes would eliminate religion-based political idioms and mobilisation. Separate and independent interventions in the cultural sphere, simultaneously with economic growth, institution and strengthening of just and equal social relations and generalised indigenous evolution and application of science and technology were needed to bring about balanced and harmonious development of society-its growing societalness. We sequentialised the process by artificially dividing the indivisible. We ignored the palpable possibility that the one-sided pursuit of growth in the framework of existing unjust and inequitous social and economic institutions of increasing private control over wealth and social power would create pressure to sharpen cleavages, disharmonie and cultural depravity despite democratic processes Such maldevelopment would generate forces bent upo dividing the people and nothing would come mor handy to them than the raw religious sentiments fo perpetuating false consciousness inimical to secularisr and socio-economic progress.

"Secularism, minus a powerful, in-built secularisation process as an inherent element of our polity was the constitutional baggage with which we began our march for building up a secular society"

It is not the case that until such harmonious develop ment strengthening equity and societalness is achieved secularism would remain an orphan. What is meant i that once a process of simultaneous, multi-dimension development is *initiated*, it would bestow genuin legitimacy to national tasks, bring about broad acceptanc of the national endeavour among different groups an weaken the forces interested in dividing the people b playing up religious and separatist sentiments. Howeve it cannot be automatic; specific steps would still b needed. It is in such a millieu that religion instead c being an instrument for legitimising the dominance of few, or being a bundle of mystical and irrational belief to make people accept and tolerate their drab existence can be used with its diversities as a means for assistin the dominated masses to rationally overcome thei weakness and handicaps in a spirit of trust, co-operatio and harmony and without in this process being swep off their feet by the new forces of development. A highl polarised society with multiple diversification is highl inflamable material for fostering divisive forces lik anti-secularism or communalism.

moves needed most

Since the short-run, immediate context cannot b divorced from the long-run, setting up of secularisatio processes would require some immediate direct, specific dramatic moves. One would need a clear and uncompromi sing concept of secularism, This has to be followed up b direct political and legal attack on the communal forces i order to render them ineffective. One has also to shun th attempts to win the political support of communa elements by appealing to their religious proclivities an identity — often in a manner amounting to acceptance o obscurantist rituals, or branding some sections as anti secular or anti-national. Common political life has to kee matters of individual faith and practices out of it purview. The policies regarding education, personnel culture, media, political mobilisation, external relations research, reservations,universal literacy etc. have crucia positive role to play for strengthening secularism. Just a untouchability was legally removed, several customs traditions and values repugnant to the basic values embodied in the Constitution have to be wiped out b moving towards a common civil code. After all, secularism is what secularism does and it has to be a vehicle o common, national endeavours without imposing an particular world-view on the people. ☐☐☐

"[illegible] wedded to secularism are facing an uphil ta[illegible] secular credentials of the state, even th un[illegible]nding of the nature and philosophy o sec[illegible]m. seem to have taken a severe beating

For the success of secularism

Amrik Singh

In this paper the author has argued that the threat to secularism today emanates from the feeling of insecurity among the majority community which is linked to under-development. He emphatically says that secularism can succeed in India only to the extent that the majority community believes in it. He calls for greater feeling of self-confidence on the part of the majority community which, he feels, will come about only when the country is growing economically and no one is made to feel that he or she is being discriminated against. This feeling of self-confidence on the part of the majority community, he is sure, can impart a feeling of security to the minorities.

WHILE THE WORD 'SECULARISM' DOES NOT occur anywhere in the Indian Constitution, more or less from the day the Constitution was drafted, this word has been flung about without much thought being given to its true meaning. As an ideal, no one can quarrel with it. As a reality, it is far from being realised.

secularism for others

While the word secularism has a different connotation in Europe, we in India have chosen to interpret it differently. In Europe the Catholic Church wielded a good deal of political power at one time. With the rise of other forces, particularly towards the end of the Middle Ages, the power of the Church began to decline. It was in that context that the phrases "Render unto Caesar what is due to Caesar and render unto God what is due to God" became current. The idea was to draw a distinction between the religious sphere and the secular sphere.

Even after this ideal had been more or less accepted, tension between various Christian denominations did not disappear. On the contrary, for a couple of hundred years, there were intense and prolonged conflicts between the Catholics and the Protestants accompanied by bloodshed and mutual killing. The Thirty Years War is a case in point.

and for us

Put another way, the idea of co-existence amongst the various denominations took several hundred years to evolve. One cannot go into details but the point to be noted is that the process of coming to terms with each other was a long-drawn out one. It was in this context that religion came to be looked upon as an individual's private concern. Whatever he believed in and whatever denomination he subscribed to were his personal affair and were not to be allowed to intrude into his role as a citizen.

This is also the ideal towards which we in our country have tried to move. But we cannot succeed unless we understand our history during the last several hundred years, the way the two leading religions in the country

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have been sometimes in a state of confrontation and sometimes in a state of co-existence. Nor have we understood the meaning of the partition of the country in 1947.

co-existence, our policy

As is often and cogently argued, had India accepted the two nation theory, all Muslims should have migrated to Pakistan. That was not intended nor did it happen except in a marginal kind of way. It followed from this that India was to be a land where both Hindus and Muslims were to live together. Co-existence has thus been the accepted policy and secularism is the term came to be used for such an approach. On the practical plane however, there have been difficulties, conflicts, even rioting and so on.

"But we cannot succeed unless we understand our history during the last several hundred years, the way the two leading religions in the country have been sometimes in a state of confrontation and sometimes in a state of co-existence"

but these anomalies !

One has to refer only to two recent developments to see that these are the outcome not of the manner in which the polity has evolved but a consequence of the crisis in which the country is caught. The reference here is to the Punjab situation since the early 80's and the Ram Janam Bhoomi-Babri Masjid situation in U.P. Without going into further details, I would like to submit that in both cases, the crisis is a manufactured one and not a real one. Which is to say that there was a problem in each case but the situations need not have taken the explosive form that they have done. Another way of looking at it would be that the polity today is more charged with communalism than it has been at any such stage since 1947

political crisis, also cause

Speaking for myself, I do not take too grim a view of what is happening. It is distressing enough and even the chances of things getting worse are not all that remote. In plain words, the communal situtation can get worse. If it does, that would be tragic indeed and would mean a real setback both for the polity and the country. But, as I see it, the current situation requires to be seen as a manifestation of the current political crisis rather than an indication of a diseased polity.

What I am more worried about is what is usually referred to as Hindu resurgence. The majority community which had a somewhat relaxed view of the things all these decades feels threatened by the minorities. One can understand the minorities feeling threatened. But if the majority feels threatened, it is not only unnatural, it also indicates a certain state of mind which may be described as obsessive, if not neurotic. This is a cause for disquiet.

sectarian allegiance tc

That disquiet arises from two facts. One is the feeli of intensified consciousness of being a Hindu or Muslim or a Sikh or a Christian. The issue of w belongs to which community arises when the basis discussion and argument becomes the religious ident of the concerned individual. In a relaxed atmosphe such an issue is not posed. Whether one belongs to tl community or that is not at all relevant. But once a set individuals become conscious of the fact that th belong to this or that particular community, it leads t situation where others also start thinking in the sa manner.

majority's fear psychos

The basic change that has come about in the 80's, a this is the second aspect of the feeling of disquiet, is tl all this time the majority community did not feel s conscious or insecure in any way. It took it for grant that it was in the majority and therefore there w nothing to feel anxious about. But what happened in t 80's was that the majority community began to f threatened. This had something to do with the rise fundamentalism and terrorism in Punjab but that, my opinion, is only a part of the explanation. T greater part of the explanation is the feeling of insecur that has begun to pervade the majority communi Why so ?

This feeling is the outcome partly of past history a partly of current developments. In my widely-discuss piece "The Crisis of Hinduism", I have called attenti to the fact that not many people seem to have realis the significance of August 15, 1947. On that day r only did the British transfer power to India, on that d for the first time almost in a thousand years, power

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transferred to the majority, in terms of a new mode reckoning.

During the pre-British days, the concept of major or minority was notional. The character of a regime w determined by the denomination to which the ru belonged. If the ruler was a Hindu, it was a Hindu Kingdo If the ruler was a Muslim, it was a Muslim kingdom and on. The concept of 'one man, one vote' was introduc by the British into India and now it is here to stay. T single fact has transformed the situation in a qualitat way.

In our situation, it should have been clear beyo doubt that since the Hindus constituted the majori and indeed an overwhelming majority (more than thr fourth of the total population) the political power h

got transferred to them, so to speak. This was the meaning of August 15, 1947. But owing to the circumstances of the departure of the British, the establishment of Pakistan, continuing tension and conflicts with it and various other factors, the majority community has become more and more unsure of itself. This is reinforced by the history of conflict between Hinduism and Islam during the last thousand years or so. In particular, the Hindu psyche cannot live down the shame and humiliation of having been ruled by the Muslim rulers for several hundred years in large parts of the country.

But the question to raise now is if that history is relevant. Has the situation not undergone a basic change since August 15. 1947 ? Furthermore, now that

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the mode of reckoning is not the religious label of the ruler but the system of democratic governance, why should there be any cause for anxiety or insecurity ? As if that was not enough, the majority community has such overwhelming strength of number that were it to think of itself only in the denominational sense, India may be legitimately described as a Hindu country. But such a proposition has not been mooted seriously at any stage and therein lies both the problem and the challenge to Indian polity.

weaknesses to overcome

In my opinion there are two basic weaknesses which need to be confronted. Perhaps it would be more appropriate to say that one is a weakness and the other is a challenge. The weakness lies in the structure of the Hindu society and the damage caused by the continuing hold of the caste system. Some of its more odious aspects have been overcome no doubt and the caste factor today is not as powerful as it was at one time. Untouchability is a legal offence and there is not as much of discrimination against those of the so-called lower castes as there used to be at one time.

casteism too

In political terms, however, the caste is a much stronger reality today. This too is a part of the social and political process at work in the country. Not only has the communal consciousness got intensified, even caste consciousness has got intensified. Once the political crisis in which the country is caught is resolved to some extent, both types of consciousness would become weaker and that would be a step in the right direction. What we have to do therefore is to try to get out of the political crisis in which we find ourselves. If that comes to pass, as it should one of these days, while the other factors would not disappear they would certainly become less urgent and less troublesome on that account.

challenges of development

The second weakness which is in the nature of a challenge is the challenge of development. The fact of the matter is that the strategy of development evolved over the decades is in need of a drastic change. While the country has made some progress without question, almost half the population still lives below the poverty line. What is important is that this ugly feature of our economic and social life is fully and decisively overcome. That can happen only if the strategy of development is redesigned. This again is a part of the political crisis in which the country is caught. While it is recognised that we should remodel the strategy of development, those crucial decisions which are a condition precedent are not being taken.

Once those decisions are taken, the focus should be on development and development has its own logic. Development is possible, amongst other things, in conditions of social and political stability and involvement of those who are today below the poverty line. Then the attention would get transferred to those issues which need to be reinstated on the agenda of the country. In plain words, the frame of argument needs to be changed from the communal to the economic plane.

why this tension ?

This is not crude Marxism as some people might argure. Tension and conflict are unavoidable in any society. The question to ask is what is the tension about It is when the issues of equity and fair distribution are given a back seat that other issues, including the one of communal identities come to the fore. Without attempting to argue too much about it, this much needs to be underscored that the strategy of development needs to be remodelled.

"Whether one belongs to this community or that is not at all relevant. But once a set of individuals become conscious of the fact that they belong to this particular community, it leads to a situation where others also start thinking in the same manner."

That would not take automatically care of other problems but it would be the starting point of the remodelling of the polity.

majority's faith, a must

One final point may be made clearly and emphatically. What is known as secularism can succeed in India only to the extent that the majority community believes in it. The minorities talking in its favour or insisting upon it has no meaning. To put it crudely, it would amount to some kind of a defensive reaction on their part. Indeed they talk of it only when they are under pressure. The pressure can come only from the majority community.

(Contd. on page 90)

Why this phenomenon of fundamentalism?

Prof. P.J. Kurien.

That people of different races, religious faiths and cultural traditions came from various regions of the world and settled down in India and became mingled together into one people is an irrefutable fact of history. Prof. Kurien, an educationist of outstanding stature, in the following piece, has clearly brought out this unique Indian character of mutual tolerance and largeness of vision, based on the ancient concept of "Vasudhaiva Kutumbakam". He has attempted to trace the emergence of fundamentalism in the polity of the country and comes to the conclusion that some of the political parties have, just for petty electoral gains, lent support to divisive and disruptive forces. He cautions that unless these parties stop playing into the hands of these destabilising elements, fundamentalism would continue to grow. The author expresses his concern at the performance of the education system, which in spite of tremendous advancements in various fields of national life, could not mould a truly secular generation during a period of four decades. He has also emphasised that electronic media, which has a far reaching appeal, must produce such constructive programmes that may bring the message of secular ideas home.

THE PREAMBLE OF THE CONSTITUTION OF India proclaims that India is a secular Republic. Most of the major religions of the world are found in India. Yet, we have no state religion as is the case in many regions of Europe and Asia and other parts of the world. The state does not discriminate between its citizens on the basis of their religious faith. In fact every citizen in this country has the fundamental right to profess and practice any religion. All citizens are treated equally and the governmental policies are not coloured by considerations of religion, caste or creed. There is, thus, a complete separation between the state and religion in India. This is the basic aspect of our secularism.

The word "Secularism" has been subjected to different interpretations. Some say that it is an anti-religious concept which is atheistic in substance. According to them a true secular person should be an opponent of all religions and religious faiths. A state which is secular, in their view, should not encourage or allow the promotion of any religion. In my view, this approach is basically wrong and I am of the firm opinion that secularism does not and should not mean atheism and it is not anti-religion, It is a positive concept which means respect for all religions. This is the secularism that we practise in India.

the world as a family

The concept of secularism is deeply rooted in the Indian traditions. From time immemorial people of different races, religious faiths and cultural traditions came to this land and settled here. They mingled

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together and became one people— the Indian people. This historic development shaped the Indian mind and tolerance towards other faiths became its hallmark.

Despite the violent ups and downs over the many millenia of its history, the Indian mind retained this tolerance and the largeness of vision. 'Vasudhaiva Kutumbakam' and 'Loka Samastaa Sukhino Bhavantu' fully reflect the Indian vision of world as a family and the wish for the welfare of all mankind. When we consider the world a family, all human beings are brothers. This concept of oneness of mankind, I think, is the basis of our secularism. As a matter of fact, we find the same vision in other religions too. The Christian concept of God as Father and human beings as his children and the

"The founding fathers of our Republic made secularism one of the bases of the governmental policy, as they realised that national reconstruction could be possible only by uniting the people of India on the basis of secular ideals. The Indian Society with its bewildering diversity needs a strong binding force to remain united. The theological state would be an anathema to the Indian ethos, and therefore, it could never be the basis for uniting the people."

Islamic concept of universal brotherhood are manifestations of the same vision. Thus there is a basic unity among all other religions. A good Christian can only be secular because the Bible teaches him to love his neighbour as himself and that his fellow beings are his own brothers. A true Muslim is basically secular as his religion emphasises universal brotherhood. A real Hindu is secular because of the universality of outlook nurtured by the Indian philosophy.

The founding fathers of our Republic made secularism one of the bases of the governmental policy, as they realised that national reconstruction could be possible only by uniting the people of India on the basis of secular ideals. The Indian Society with its bewildering diversity needs a strong binding force to remain united. The theological state would be an anathema to the Indian ethos, and therefore, it could never be the basis for uniting the people.

That is why great geniuses like Gandhiji, Panditji and other stalwarts of the freedom movement emphasised and strived to make free India secular as this alone would unite our people. Their keen sense of history and their deep understanding of the age-old traditions of this land helped them on the eve of freedom to steer India out of the welter of confusions created by the pulls and pressures of religious fundamentalists and bigots and the more-than-obliging-attitude of the imperial power which was just packing up to quit. When our neighbour Pakistan became a theological State, India has remained a beacon of secularism. The history of that country during the past forty years has proved beyond a shadow of doubt that theological State can not meet the aspirations of the people. The natural conclusion is that only secular polity could unite the people and exploit their full potential for nation building. This, I think is the lesson that we learn from the history of our country as well as of our neighbour.

emergence of fundamentalism

Let me now attempt to make a brief assessment of the working of the secular ideal in our country. Free India chose a democratic political set-up and socialistic path for economic development. Despite continuous efforts from many powerful quarters to deflect India from its chosen path it remained a truly democratic country and our syteem has stood the test of time. However, one cannot close his eyes to the serious challenges from disruptive forces being faced today by the system. I must say that the most serious challenge to our secular polity today is coming from the religious fundamentalism. Of course, the emergence of fundamentalism is not confined to India. It has come up in a big way in some Asian countries which is posing a threat to world peace. In our country it constitutes a serious threat to the social stability, communal amity and above all the integrity of the country. What exactly is religious fundamentalism? A lot of confusion seems to prevail in this area. It is believed by some people that religious fundamentalism emphasises the purity of religious thoughts and practices. It is nothing of that sort. As a matter of fact religious fundamentalism has nothing fundamental or religious about it. It is a perverted and distorted outlook about one's own religion. An imaginary superiority of one's own religion is the basis of fundamentalism. So naturally this will lead to an attitude of contempt for other faiths. The religious fundamentalism has only created mutual hatred and violence and has weakend the fabric of unity. What we see in Punjab is a clear manifestation of religious fundamentalism. This should enable us to take a good measure of the threat potential of this phenomenon. As has been mentioned earlier this has nothing to do with any religion. As the basic tenet of all religions is love and all religions contain

"The forces of disunity and disruption are always very much present in our society. They are just waiting for an opportunity to come to the surface. These forces have different faces. Sometimes they appear as religious fundamentalists and sometimes in some other form. They thrive on discord and disharmony."

truth, there is no place for an imaginary superiority of any religion. There is also no place for violence in trying to honestly follow the basic tenets of one's religion. A true follower of a religion will only respect other religions. Thus, the fundamentalists are not following any religion and they are a great menace which has to be fought tooth and nail.

Now a question would naturally come up. Why has this phenomenon of fundamentalism come up in our society? Why could not our democratic secular political system contain the growth of these forces?

The answer is not simple. The forces of disunity and disruption are always very much present in our society

They are just waiting for an opportunity to come to the surface. These forces have different faces. Sometimes they appear as religious fundamentalists and sometimes in some other form. They thrive on discord and disharmony. Unfortunately for our country, some of our political parties have contributed to the growth of these forces. For achieving their sectarian interests, they made common cause with these forces and gave them sustenance and respectability. These parties have no faith in secularism and have always opposed tooth and nail all progressive measures of the Government. Pandit Jawahar Lal Nehru had faced fierce opposition from these forces because he tried to build a modern India, an India which could meet the challenges of the modern world. These forces had opposed the special constitutional rights given to the minorities. The tragedy is that

"It is in the millions of class rooms in the country, that the future of India is taking shape. It is hare that our tiny tots acquire little preguliees which grow into diehard attitudes tater. What can we expect from children who receive their education in the most unenlightening atmosphere ? A lack of perspective has bedevilled the education in our country and we are paying the price for it now."

the compulsions of electoral politics may have brought them temporary political dividends, but it has dealt a deadly blow to the secular polity. Through the process of compromises which these political parties made with these forces, fundamentalism grew and gained strength. And I believe that unless these parties stop playing into the hands of these forces their growth cannot be checked and the secular polity will always remain threatened.

vital role of education

It is my firm conviction that education has vital role to play in promoting and strengthening our secular ideals. I have no hesitation to say that our education system could not play its role effectively. Even after 40 years of independence and tremendous advancement in different fields of naional life, our education system could not mould a truly secular generation. If young men and women in some parts of the country being motivated by religious fundamentalism take up arms to fight against their own motherland, the message is loud and clear. Why should our young men and women feel drawn towards the fundamentalist forces and not towards the secular ideals ? It is because our education system could not create in their minds a strong commitment towards secular ideals. In the writing of history communal bias creeps in; in the teaching of history racial and other prejudices are brought into play. Why can't we change all this ? It is in the millions of class rooms in the country, that the future of India is taking shape. It is here that our tiny tots acquire little prejudices which grow into diehard attitudes later. What can we expect from children who receive their education in the most unenlightening atmosphere ? A lack of perspective has bedevilled the education in our country and we are paying the price for it now. I mu[illegible] here that the Prime Minister Shri Rajiv Gandh[illegible] taken some bold initiatives in the matter of restruc[illegible] the educational system.

The new education policy is an important [illegible] forward in this direction. Let us hope that with th[illegible] commitment shown by the national leadership to[illegible] restructuring and strengthening the educa[illegible] system, there will be serious efforts made to stren[illegible] the secular content of curriculum etc.

Electronic medium has become an integral part [illegible] daily life and its influence on our mind is much [illegible] than what we are prepared to believe. I feel that [illegible] should be deliberate efforts made to bring in a s[illegible] the orientation of the programmes being shown o[illegible] etc. so as to project the secular character of the p[illegible] A recent serial was, no doubt, a bold attempt i[illegible] direction and it has gone well with people. The Tele[illegible] should, of course, show more such serials. Bu[illegible] projection of secular ideals should not be confi[illegible] the serials only. This must be the guiding princi[illegible] selecting and preparing all programmes. Interestin[illegible] grammes based on important episodes from our hi[illegible] important events from the freedom struggle and the [illegible] our great leaders, which highlight the secular cha[illegible] of our people should be prepared and shown o[illegible] There must be a constant exposure of people to th[illegible] of secularism and I am sure this will have treme[illegible] impact on their mind. In Kerala, street plays exp[illegible] soical evils have become very popular. These play[illegible] a very sharp focus and a message and their imp[illegible] tremendous. I would suggest that the authorities e[illegible] voluntary cultural organisations to prepare and [illegible] such street plays to emphasise the secular aspect [illegible] life. These plays should be staged in areas whi[illegible] considered to be communally sensitive and riot-[illegible] There are hundred and one ways to do it. All t[illegible] required is initiative and a sense of commitmen[illegible]

"The history of this country is replete with inst[illegible] of Hindus and Muslims fighting sho[illegible] to shoulder against the common advers[illegible] Where is there the conflict of interests of thes[illegible] communities ? India with its democratic s[illegible] gives ample opportunities to every section [illegible] society to seek fulfilment of its legitimate a[illegible] tions and participate in the national endeav[illegible]

elimination of mistr[illegible]

It is unfortunate that even after four decad[illegible] independence we could not totally remove the mi[illegible] among the religious communities in our co[illegible] Partition of India is an ugly chapter in the history [illegible] country which should well be forgotten. But unfortu[illegible] the ghost of partition still haunts the minds of [illegible] Our people must know that dirty imperialist ga[illegible] divide them on communal lines and the insatiable [illegible] for power of a handful of communal-minded pe[illegible] who could manipulate the minds of gullible peopl[illegible] responsible for dividing the Indian people on comm[illegible]

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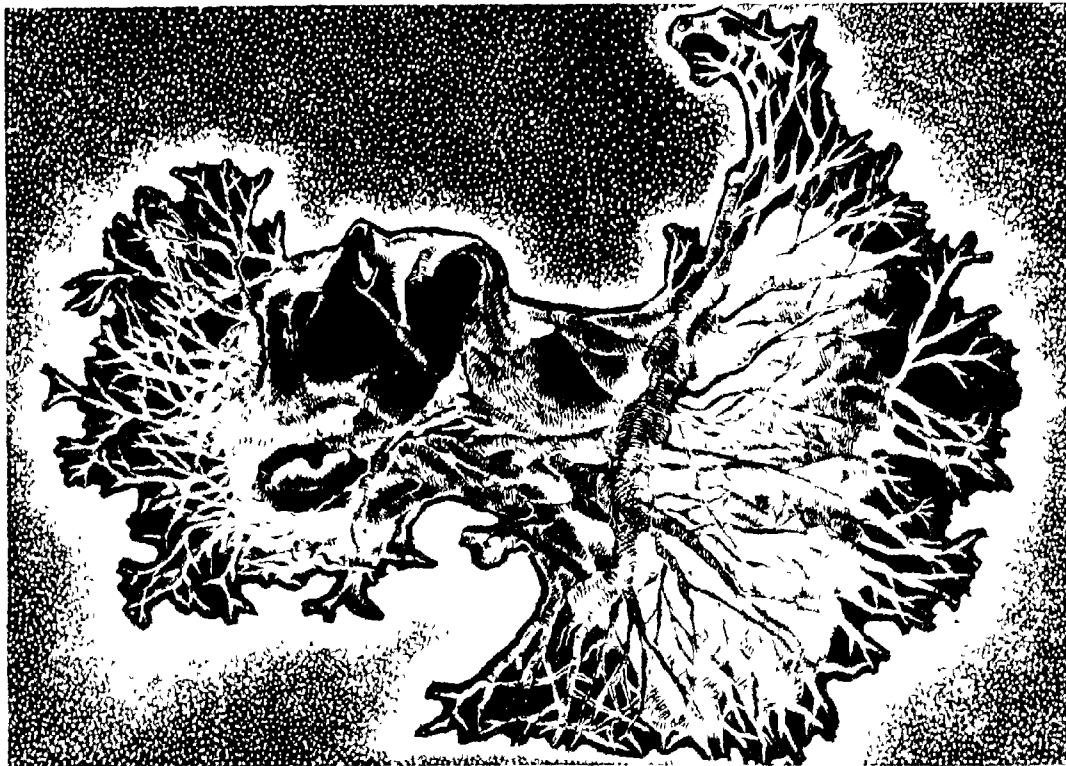
Secularism : shadow or substance ?

K.F. Rustamji

A fine pen-portrait of secularism has been painted by Shri K.F. Rustamji, an experienced and seasoned administrator who has held key posts in post-independence era. To him, secularism sounds something out of geometry, a cold scientific theorem, which has got nothing to do with anything divine, and has no hope of a place in heaven. Yet, he is convinced that if our country has to succeed, we have to give a place of honour to secularism, and build it up with the help of all forces. In His remarkably impartial, non-partisan, delightful style, which appeals to reason and sound sense, he has analysed the causes of the persisting influence of communal forces which create disruption in an otherwise peace-loving society. He expounds, in very clear terms, that secularism does not mean the absence of faith, rather the best secularists, like Mahatma Gandhi, are devout followers of religion. What secularism stands for, is mutual trust, interest in the cohesion of group, despite difference of opinions and creeds, the author believes, He holds that distortion of historical facts have done a great harm to the psyche of younger generation and pleads that sooner they are eliminated, the better for the entire nation.

IT IS A STRANGE FACTTHAT the word "secular" which denotes a noble concept is easy to criticise, disregard, and even ridicule. It is vague, imprecise, wrong-sounding, and not at all inspiring. We should have chosen a better word when we put the concept into the Constitution.

Religion stirs up the emotions with visions of Gods and Godesses, sins and absolutions, and incense sticks and mother singing her 'bhajans', and a popular TV Serial on a fine Sunday, and wishes that were made and granted. Secularism is often mentioned as the opposite of religion, which it certainly is not. It is said to be a negative emotion-like nonviolence. It is said to be communal, non-combatant, or like the non-vegeta non-cooperation and non-interference-all good in t time, and in limited doses good for the system.

a much maligned w

Secularism sounds like something out of geomet a cold scientific theorem, or the cult of supermen distant planet. It carries no hope of a place in heave peace of mind of the type that prayers and contin can confer. No hope of spreading the gospel. No fas dieting or health-giving practices. It has nothing t

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ith all the joy of marriage celebrations, and all the oughts of being here for a time and moving on, which eath ceremonies are supposed to inculcate. It does not ven give the satisfaction of burning down a few houses the lane, or doing a Maliana and waiting for a ommission to say that it was all the result of provocaon. That can only come from communalism.

The trouble is that no proper word has been scovered that can bring out all the glamour and gleam the word secular. Oh! for a word like Perestroika or amdardi or Insaniyat, or any word that can express at feeling of goodwill and good cheer that underlines cularism. It is supposed to make men sensible, at a ne when good sense is at a discredit. It is said to make

"The trouble is that no proper word has been scovered that can bring out all the glamour and leam of the word secular. Oh ! for a word like erestroika or Hamdardi or Insaniyat, or any ord that can express that feeling of goodwill and ood cheer that underlines secularism."

philosophic, when to talk of a philosophy is to be assed as an invertebrate. It is said to be so noble that it akes you touch the hand of God. But who wants to do at if a gun is at hand, and terrorism offers a few bank bberies, and shelter in a place of worship after you ve disposed off the loot to the girls and the family.

For want of a good word we are all at the mercy of the natics and free-booters who pose as positive men of tion-priming ancient faith with new methods of desoying those who do not belong to it. While those of us o have faith in secularism vainly try to explain that we e not negative. It is just that we want to live in peace th others.

reverse of communalism

The original sin is to consider secularism as a reverse religion; something akin to atheism, which it certainly not. Secularism is the reverse of communalism. If mmunalism is war, secularism is peace. If communaln is the unchecked and unbridled persecution of ose who are of other faiths, secularism is the desire to e your faith to protect others, with equal opportunities r those who belong to other faiths. You can be a true liever in religion and yet be totally secular. Possibly e best way to explain is that secular means civilised-a od citizen-and once again we are on a difficult ground cause secularism is supposed to be a Western ncept, although the one religion which could be called ily secular is Hinduism, which rails at fanatics and opagates the deepest philosophy, and has much to y about protecting life, in a manner which no other ligion has sanctified.

There is a family we know whose home is a delight to it because there is so much harmony in it, although factors that exist would tend to suggest disharmony. e father is a professor, a man who is a truly devout ndu, who tries to be a Gandhiji in the house. His wife, ch younger, is one of those busy women who are always itating, joining processions, making placards, looking out for any women in trouble. She says that she believes in all religions, but the fact is that she has no mind for the abstract. Their daughter is married to a Muslim, both working, both practising different faiths, both very articulate, and full of fun. The son is a teenager who spreads out deep in a chair, and looks at a dreary world cynically-says he is an agnostic like Pandit Nehru. In the family there is faith, and doubt, and each one has a status, each one respects the other, each cares for all. I have often wondered if this is not an example of what secularism should be.

In its finest image secularism does not mean an absence of faith, or religion, in fact the best secularists are extremely devout followers of religion, like Gandhiji. Whatever the faith, there is a love of man, whatever the opinions, there is a mutual trust, and an interest in the cohesion of the group which makes it stronger because each has someone else's support, in each sickness there is someone who cares, each opinion is clear and purified in the light of free and fair discussion.

no reasoning behind riots

The opposite of secularism, you can see clearly in a street rocked with communal tension. Each house suspects the other of storing weapons. Again and again there are heated arguments over small matters. Each religious group apprehends danger from the other. No man is prepared to meet the other and talk about the reasons for the fear that grips the area. Then there is a small incident and all the tension bursts into a hysterical riot. Houses are burnt, stabbing cases occur, innocent persons are set upon by groups of incensed youngsters and hacked to death. And then the two sides are only interested in lies. This is the opposite of secularism—unchecked communalism in which there is not one softening touch of religion, only the blind strokes of relig

"In its finest image secularism does not mean an absence of faith, or religion, in fact the best secularists are extremely devout followers of religion, like Gandhiji. Whatever the faith, there is a love of man, whatever the opinions, there is mutual trust, and an interest in the cohesion of the group which makes it stronger because each has someone else's support, in each sickness there is someone who cares, each opinion is clear and purified in the light of free and fair discussion."

ious antagonisms brought to a pitch of hysteria by the misunderstandings of a closed society. They hate blindly, kill and burn mercilessly, all in the unjustified panic and hysteria of a communal group. There is no logic, no reason, no compassion, only the BRUTISH prosper

So habit forming is this form of behaviour that even if they get into the same religious group, the desire to kill and rape remains, because the atavistic behaviour of Hindus and Muslims in the partition riots, which appeared to be based purely on religious differences, was not at all religious because it became more ferocious in Pakistan between Muslim and Muslim, or

between different language groups in India. The children of those who had participated in the first holocaust became the aggressors in the second. It is an atavistic throwback, and appears to be almost an acquired character.

Is secularism getting unpopular ? People say it is. It always gets unpopular before a riot, and picks up popularity after it. It is not getting unpopular with those who need protection. It is not unpopular among the Muslims, Sikhs, Christians and other minorities, although there are many who say that the majority is not truly secular and the Congress has lost the shine of its secular image after the death of Pandit Nehru. Maulana Azad vainly pleaded with the Muslims to join the

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Congress and work for a united India. They reproached him, gave in to the blandishments of communal agitators, and have lived to see the damage it has done to them, and to all of us.

Secularism unfortunately is getting unpopular among some of the Hindus who feel that they are being victimised by the militancy of the sikhs, and dislike the advantages given to the minorities.Sikh extremism has given Hindu militancy a special impetus, and in consequence there is a lot of loose talk of teaching of lessons. Actually even Sikh militancy had not made an all-out attack on the Hindus. They say that their enemy is the centre, and they have no communal feelings, and they point out that the killings among the Sikhs have been more than those among the Hindus.

reservatio.. policy of the state

In the competition for jobs and employment, the reservation given to some communities comes in for special mention as communalism in reverse, but communalism all the same. It is true that if the state wants to select the best but goes in for the second and third best for reasons which are special it is easy to say that the best are denied jobs and those who are inferior in talents are taken. How does the secular approach square with this. Obviously if a few jobs are reserved, it indicates a sense of fairness and justice in order to bring up those who have been depressed in the past. There is full justification for that. To condemn a certain class or community to an inferior position because of birth, is undoubtedly repugnant to all. What is difficult to accept, however, is the contention that after getting the benefits in recruitment they should in their service life get another benefit so that seniority and merit can be overlooked. That part of reservation which applies to promotions is possibly an innovation that was no specially favoured by the founding fathers.

distortion of histor

If we want India to succeed, we have to give a place o honour to secularism. We have to build it up as a concept of power and dignity. We have to take up the help of all forces. We have to prove to the religiou groups that secularism is not a concept that is opposed to them. In fact secularism arises from a deep faith in religion. In an admirable study on the subject K.R. Malkhani of the Deendayal Research Institute ha shown how historical distoritions have occurred, and the wars in medieval India made to appear as communa

"To condemn a certain class or community to a inferior postition because of birth, is undoubtedl repugnant to all. What is difficult to accept however, is the contention that after getting th benefits in recruitment they should in their servic life get another benefit so that seniority and meri can be overlooked."

conflicts, when they were primarily a scramble fo power. A delightful serial being currently televised ha proved the same them convincingly. There is a distinc movement towards a new faith in secularism. The onl way for us is to put our faith in those precepts which have come down to us from centuries of religiou beliefs, and which plainly tell us that all men were created equal and have the right to move with freedom and dignity. What the religious beliefs have taught us has to be embodied in all our plans, all our professiona activities, all our laws so that each man in the countr may feel that he is living in a country where he is wanted and cherished. That is the essence of secularism. □

(Contd. from page 52)

"Evil Empire". The grows wider recognition that th czar within each of us, cannot be domesticated by force A global school of enlightened iconoclasm has to be forged to incinerate the cumulative archives of totem and taboos that still rule the inner core of man. For this alone can open the new dawn appropriate to the cal of the new age. The need is of the magnetic excitation o the heart for the twenty first century, not necessarily o the electronic machines. Secularism, may I plead cannot be secure, as an island on land or the seas, in th current age, Gandhiji and his philosophy notwith standing. I have dissected my heart without mercy. I am sad, I have failed to discover a short cut, but to the pit

(Contd. from page 56)

secular order of life. Let us begin by building bridges o understanding and the sharing of day to day life by followers of all religions, and especially aim at a creative integration of Hinduism and Islam which remained unfinished on the sands of history. □

The attacks on it must stop !

S.C.Bhatt

India chose the path of secularism deliberately and consciously because of its age-old multi-religious and multi-racial character. But the author here laments that unfortunately for the country, the forces of disruption and division are always at work and fundamentalism is being fanned which is leading to frequent occurrence of communal violence which a weak administration and weaker political system is not able to put down effectively and in time. In fact, the political system that we have allowed to be built up is itself divisive and tends to stratify Indians into communities and castes for the all-important purpose of winning elections. Despite the fact that some of our neighbouring countries have declared themselves to be governed by the tenets of a particular religion, India's choice of following the principles of non-discrimination and ignoring the religion of the vast bulk of the population in any matter connected with the State is no small a thing ! But the author cautions that if we take our secularism for granted and even attack it day in and day out, we are only driving the people to think on narrow lines and accept the futility of secularism.

THE CONSTITUTION OF INDIA, which enshrines the secular concept and structure of the state without (for years) explicitly using the word, was the product of the freedom struggle which was waged by man and women wedded to the equality of all Indians without distinction of caste or creed. The struggle was conducted under Mahatma Gandhi's leadership and to him, to use his own phraseology, the equality of all religious communities was "an article of faith". The struggle drew into its fold distinguished men and women of all communities and all parts of India. Even while Mohammad Ali Jinnah, then President of the Muslim League and later founder of Pakistan, dubbed the Indian National Congress a "Hindu Congress", the organisation was headed by Maulana Abul Kalam Azad.

equality of all

In fact, Abul Kalam Azad was elected to the Congress presidency thrice, the third and last term spread over five years. Dadabhai Naoroji, who wrote a monumental book on India's impoverishment under British rule, was also President of the Congress thrice. He belonged to the tiniest minority, the Parsis who had sought refuge in India 1,400 years ago to escape religious persecution in ancient Persia. It was but natural that the men and women who had been nurtured by such a broadmined and truly nationalist movement, encompassing all Indians, even if a large section, under the leadership of Jinnah chose a different path for itself, should give us a constitution proclaiming the equality of all Indians,

INDIA : A CONFLUENCE OF CREEDS

irrespective of religion, freedom from discrimination, apart from freedom to practise and preach one's faith, so that the state would not be identified with any religion and no Indian, whatever his religion, would suffer any disability in matters of state.

in constitution

We shall see shortly how the assumption that all mixed societies are perse secular is not supported by facts. First let us see how the founding fathers of the Constitution of India wrote secularism into it without even using the word, which, it may be noted, was brought in much later in an amendment to the Preamble. The basic privisions on non-discrimination are contained

"There is no comparable constitution in the world which gives its minorities total equality in all vital matters, like employment under the state, practice and propagation of religion, freedom from discrimination and the total self-denial by the predominant section of the Indian population to give any status of any kind to its religion, Hinduism."

in the chapter on Fundamental Rights which are enforceable by courts. Article 15 states: "The State shall not discriminate against any citizen on grounds only of religion, race, caste, sex, place of birth or any of them. "While this prevents discrimination, the next article, Article 16, positively lays down that, "There shall be equality of opportunity for all citizens in matters relating to appointment to any office under the State."

Coming to the matter of the practice and even propagation of one's faith, this is protected by Article 15 of the Constitution. Articles 26 and 30 entitle the religious minorities to the right to establish and maintain institutions for charitable and religious purposes as well as educational institutions. There is no comparable constitution in the world which gives its minorities total equality in all vital matters, like employment under the state, practice and propagation of religion, freedom from discrimination and the total *self-denial by the predominant section of the Indian* population to give any status of any kind to its religion, Hinduism.

For years, the secular character was allowed to be inherent in the constitution without feeling the need to spell it out. Then by an amendment in the seventies, the word was also introduced in the Preamble to the the Constitution which now describes India as a "Sovereign, Socialist, Secular, Democratic Republic"

religion state

As for the assumption that mixed, multireligious or multiracial countries are secular, we have to look at some of our neighbours to see how untrue it is. Take Bangladesh which has a Hindu population of 12.1 per cent against a Muslim population of 86.6 per cent. The case is almost the reverse that of India. India has a dominant religion, with Hindus 82.64 per cent a Muslim population is (according to the 1981 Ce 11.35 per cent, slightly less than the percent Hindus in Bangladesh. Bangladesh stared off under the Mujib constitution, which laid down secul along with nationalism, socialism and democracy fundamental principles of the constitution o country. But in 1975 Sheikh Mujibur-Rahman overthrown and killed and two years later the consti was amended under which secularism was deleted the constitution and a reference to Islam was introd It now reads: "The country shall be guided b principles of absolute trust in the Almighty nationalism, democracy and socialism".

Now even this latent reference to Islam has made absolutely explicit and Bangladesh has declared an Islamic Republic, a country which higher percentage of Hindus than India has of Mu Inspite of opposition by some opposition partie other elements, the amendment has been p through. What about the other nation born throu pangs of partition of the sub-continent, Paki Under its constitution, Pakistan is an Islamic Rep based on principles of "democracy, freedom, equ tolerance and social justice as enunciated by Islan President must be a Muslim. In its population it small component of Hindus, 1.6 per cent and Chri 1.3 per cent but nobody has heard of any Hin Christian ever holding an office of any conseq under the state of Pakistan. The Christian comp of its population is only slightly less than the perce in India, which is 2.43.

Malaysia is yet another example, a shining one multireligious and multiracial society, known f tolerance and even allowing the Chinese, Buddhi Taoists, and the Hindus a share in the governance country, with the dominant Muslims. But, althou Muslim population is even less than 50 per cent total population, Islam is its state religion. The he

"... when India chose the secular path it deliberate act of choice which sprang fro history and ideals of the freedom movement not something which was necessarily dictat the character of its multireligious populatic

state is a Muslim, one of the nine sultans o federating states of west Malaysia.

secularism, our cho

So, when India chose the secular path it deliberate act of choice which sprang from the h and ideals of the freedom movement, and not some which was necessarily dictated by the character multireligious population. The question now fo how has India lived up to the secular promise ?

It is a record which Indians have no reason ashamed of. In fact, there is sufficient ground for proud that India has tried to live up to its own idea the eight Indian Presidents since the constitutio

enforced in January 1950, as many as three were non-Hindus, two Muslims, Dr. Zakir Hussain and Fakhruddin Ali Ahmed, and a Sikh; Giani Zail Singh. Two Muslims have been Chief Justice of India, one of whom, Mr M.Hidayatullah, was also Vice President for a term, a Muslim was Air Force Chief, Air Chief Marshal I.H. Lateef, several others who have reached the second or a senior enough position in the army, navy and the air force, there have been invariably more than one Muslim minister at the Centre and in most states, some of which even had Muslim chief ministers, belonging to different political parties, apart from Jammu and Kahmir which always has had a Muslim as its Chief Minister, many governors, vice chancellors, leaders in the field of science and techology, any number of ambassadors and so on.

"As in the arts so in sports, whether it is hockey or cricket, football or tennis or any other game, athletics, boxing, aquatics or horsemanship, Muslims, Christians, Sikhs and the other minorities have given the country some outstanding sportsmen in the four decades of independence."

Despite the constant criticism one hears, the Indian system is non-discriminatory. Otherwise, how could the Parsis, the most miniscule of minorities, give the country its first Field Marshal, a naval and an air force chief? The current chief of the IAF belongs to yet another tiny minority, the Anglo-Indians. Two Sikhs have headed the air force and in the army they have a representation which could be the envy of any other community. Two christians have been Naval Chiefs.

Recently, a less distinguished sitar player, Rais Khan migrated to Pakistan and accused India of discrimination against Muslim musicians. He was immediately answered by four distinguished Muslim musicians, both vocalists and instrumentalists. It is this country's fate to be maligned by some of its own sons who have attained some fame but anyone with the least acquaintance with the state of the arts will readily admit that often to belong to a minority gives you a better passport to success in the wide area of the arts, from cinema to music and dance, from theatre to painting and so on. As in the arts so in sports, whether it is hockey or cricket, football or tennis or any other game, athletics, boxing, aquatics or horsemanship. Muslims, Christians, Sikhs and the other minorities have given the country some outstanding sportsmen in the four decades of independence. Their names will fill whole columns. In games where the leadership of the team is of some consequence, as in cricket, players from the minority community have for several years been given charge of the captainship.

equal opportunities for all

Sports and the arts are not governed by any constitutional provisions and yet the general non-discriminatory climate in the country ensures that ability and performance would be given due weight and nobody will be held back because of his religion. Even the constitutional provisions cannot be of much help if there are not enough people from the minorities competing for positions and taking competitive tests and examinations. In other words, equality of opportunity is guaranteed but there should always be people to take advantage of the many opportunities that exist under the state. In the case of chiefs of the three defence services that we have cited the tests are stiff indeed and people have to go through a variety of selections in which no secularism will help them if they do not work hard and qualify in the various tests and they do not have the quality of leadership which takes them to the top. But if there were no secularism, that is, non-discrimination on the ground of your religion alone, you could be put down or be superceded by a less qualified person belonging to a particular community.

exceptions too !

It is true that the official machinery at lower levels, especially in the States, has often been guilty of not going strictly by the principle of non-discrimination which is the hallmark of secularism and the minorities have sometime suffered. The representation of some minorities, particularly Muslims, has not been adequate in some services like the police, where because of a discrimination in their favour by the British rulers they used to dominate. Now this is being sought to be corrected and in certain Central paramilitary forces preference is being shown to the Muslims so that their representation is stepped up.

who is to blame ?

Often, however, the failure of a minority to get its due share in such selections is the result of poor educational standards. Instead of emphasising education and attainment of high standards, some of the socalled leaders of the minority community harp on discrimination and thus mar even further the chances of the students and candidates of their community. Often it has been found that the facilities created by minority educational institutions are availed of largely by the Hindus. Especially among the Muslims, there has to be a mass awakening campaign to make the people not only send their children to schools and colleges but also to endeavour to attain standards of excellence.

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sordid stratification

Unfortunately for the country, the forces of disruption and division are always at work and fundamentalism is

being fanned which is leading to frequent occurrence of communal violence which a weak administration and weaker political system is not able to put down effectively and in time. In fact, the political system that we have allowed to be built up is itself divisive and tends to stratify Indians into communities and castes for the all-important purpose of winning elections. Some politicians and their parties have even worked out formulas of winning elections with the help of a combination of castes and communities, very much like the Hindi films having a box office formula.

It is these elements which, in league with the fundamentalist forces, are often responsible for riots

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and violence. Intra-party rivalry is sometimes the main cause of ugly incidents and since they control the government for the time being the forces of law and order are helpless. Even these forces have been exposed and identified by the force of public opinion as expressed in independent newspapers often run and owned by the members of the majority community themselves. The Indian system tries to correct itself and test itself by its own rigid standards and is not content with the thought that it is better than what other countries have given their people.

why these mean attacks ?

It is this spirit of self-criticism which is a redeeming feature. At the same time it is a danger signal. Over-emphasis on failures to the exclusion of an appreciation of solid achievements and a kind of competition in the media to capitalise on certain events gives an exaggerated picture of the secular front. Quite apart from what similar countries have done to thier Hindu or other minorities, which is not totally irrelevant, it is noteworthy that the Indian system has deliberately chosen the path of non-discrimination and ignored the religion of the vast bulk of the country in any matter connected with the state. That is no small thing and if we just take it for granted-our secularism-and even attack it day in and day out, we are only driving the people to think on narrow lines and accept the futility of secularism.

The isolationism that sometimes is evident among the Hindus, or a section of them, is the result of being pushed around too much. Inspite of the fact that the Muslims in the majority areas of the north and the east chose to form a separate nation, the Hindus in India which still remained and which became bigger because all the former princely states merged with it, chose for their country a secular path—a path in which they shared with their fellowmen of other faiths, everything on a basis of equality and did not insist on Hinduism getting the kind of pride of place which Pakistan and later Bangladesh gave to Islam.

Beware of divisive forces !

We are inclined to take our secular status for granted and are too ready to attack any deviation, real or imaginary, with the utmost severity. Too much denigration and too little appreciation of Indian secularism can only damage the cause that many of the critics may seek

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to serve. The armed struggle waged by a section of the Sikhs in the past few years, in the name of religion, has done considerable damage to the fabric of secularism. Instead of the constant attacks by the fundamentalists, aided by subtle means by others speaking a more attractive language, misguided media criticism and ridicule, we should have more analysis and effort at understanding each other and the forces which seek to divide us from one another.

and see reality

Let us understand our record against the harsh reality of what obtains in other countries which started off along with us. In fact and in law, these countries have enforced the superiority of the dominant group and its religion over the other groups and denied the latter any outlet for their creative abilities, apart from their rights and privileges. We have deliberately chosen a more tolerant path and are better off as a nation thereby. There are failures and shortcomings which must be corrected and made good, but in a spirit of helpfulness, not of denigration. ☐☐☐

(Contd from page 36)

good in the literature and the noble in the life of one to the notice of the other. We have to overcome narrowness. We have to so broaden our ideals and elevate our souls as to identify the well-being of every Indian with our well-being. We have to break down the mental barriers which lead us to separate enclosures. We must cultivate the friendliness which will permeate the entire body of our people. This can be done only if we firmly imbibe the ideal of secularism. ☐☐☐

Secularism— a mirage, a reality !

Raj Gill

The author, a seasoned journalist has put forward the theory that one has to be religious first and secular later. In his opinion, secularism is another word for tolerance, which is preached by all religions. Secularism can not be a dictate nor it can be enforced by law. It has to be an individual choice made by free will. Referring to the steadily growing communal incidents during the past four decades, he maintains that they are engineered by fanatics who apparently carry the banners of various religions, but, in fact, nurse in their hearts political ambitions. He warns that our identity, whatever it may be, religious, political or social, directly depends on our liberty. Once this liberty is at stake, our identity will be lost. Secularism, he asserts, is a matter of heart and not of mind, as it grows in a soil comprising compassion and piety, and not in administrative or political fields.

WHAT IS SECULARISM ? NONE CAN GIVE you the right definition of the term. Even the most ardent exponent of the term differ on its meanings. In fact, their zeal to institute secularism in the Indian polity has pushed the term so far away from reality that today it has come to be more of a mirage than an accepted norm. The vested interests are now using this phenomenon of mirage as a magic wand for political gains and popularity among minorities. It is ironic, not tragic, that minorities in India have come to be identified with religion and not with community or profession. This is the reason that secularism today has come to mean as preservation of religious minorities in their traditional modes. But this is not the only meaning that is attributed to 'secularism'. There are others who consider it to mean separation of religion from State. For some secularism relegates the religion to the backyard. If you are secular you cannot put your religion to the fore. It must always come after-ward. But afterward of what ? Nobody can tell you that.

a red rag to religious leaders

Before we go on with what secularism means we must first find out that why the necessity arose to adopt this covenant. We do not have to go far to find the answer It was needed because we wanted to have a stable polity in a religious, lingual and cultural diversity. In other words it was needed to structure a united nation with common goals and ideals while preserving the diverse identities in religion, culture and language. But have we succeeded in it ? No. Not even a little. In fact, secularism has not grown gradually into an anathema but also has come to be a red rag to the religious leaders with political aspriation. The establishment of such organisations as Rashtriya Swayamsevak Sangh, Vishal Hindu Parished, Muslim Majlis-e-Mushawarat, Majlis Ittehad-ul-Muslimeen, Muslim United Front, Shiv Sena, Adam Sena, United Akali Dal, Akali Dal, and so on are testimony to the growing antagonism to secularism. Because secularism today is being taken as a *threat* to

religious identities; to the existence of religious diversities, though secularism was never conceived as such.

The very fact that secularism has not taken roots in the Indian polity requires that the term should be reviewed. What is secularism, after all? Before we decide what it is we must tick out what it is not. First of all secularism is not a rational term. It is not also a philosophical concept. And it is not a political ideology. It is also neither a law nor a religious dictate. As such it does not have either the inherent authority of religion, nor metaphysical significance of a philosophical concept. It does not have even the power of a tradition, though it is not altogether a modern concept, as it is

"Secularism simply is a covenant; a covenant among the religious identities for co-existence and national homogeniety. Secularism means, in layman's language, tolerance. The concept of tolerance was there even in the Vedic time. So we cannot boast of having conceived it in the modern times."

generally believed. Secularism simply is a covenant; a covenant among the religious identities for co-existence and national homgeneity. Secularism means, in layman's language, tolerance. The concept of tolerance was there even in Vedic time. So we cannot boast of having conceived it in the modern times.

Besides, the concept of tolerance cannot be treated as a creed or a principle. It is absolutely, exclusively an individual affair. It should have been publicised as such. Just because we erred in introducing it at individual level, and instead, introduced it as a regimentation, we have failed in achieving the intended objective, that is, a stable polity in diversity, and also in checking the virus of communalism.

The need for tolerance, or for secularism, is a compulsion that springs from within the folds of any diverse polity. But this compulsion must not be mistaken for a dictate. It is rather a safeguard for a homogeneous society. But it cannot be the ideological structure for a society. Similarly we cannot take it as a ground for a democratic setup. All it can be is a goal. A goal for a polity with diverse religious identities, cultural entities and lingual prolificity. The concept of ground precludes the imperatives of game. Because then the teams have the option to play on a particular ground or not. But the concept of the goal preculdes this option. Because the concept comes into play only when the game is on. So we come to the earlier conclusion again, that is, secularism is simply verbal replacement of the word 'tolerance' that was in vogue even in Vedic times. One cannot preach secularism as a legal or logical dictate. Such a dictate is patently contrary to the fundamental concept of secularism. Moreover, secularism is a matter of heart and not of mind. It flourishes in a soil comprising compassion and piety. it dies in administrative or political fields.

No imposing of choice

Secularism is a free choice. If we want it interwoven in the socio-religious fabric then the pre-condition is free choice. And free choice on individual level. Not on community, religious or political level. Because matters of heart react violently to constraints bounds and dictates. As such each religion, each individual, has to chart its own way to the goal of secularism. There can be no guidelines or guide posts for such a choice. And that is where we have erred. We have tried to impose the choice, an act from which everyone shied. So we failed in converting the Indian polity with religious diversity into a secular polity.

The question arises at which point have we gone astray from the right course of secularism. This question leads to another. Were we ever on the right course? The answer is no. We tried to induct secularism into the structure of our polity as a serum and not as a free choice for homogeneity and co-existence. Hence, it was either a waste or just induced reaction. In either case it failed to achieve the intended goal. The reaction took varied forms. Some considered secularism as a threat to religion, others interpreted it as a force separating religion from State. Yet others thought it a direct threat to the very existence of religion. Because the way secularism has been preached over the years, it had come to mean that be secular first and religious later; or that relegate the religion to the backyard because we do not need it. We need only secularism. As such secularism came to be viewed upon as a new religion. And everyone knows that conversions to new religions are not an easy matter.

But these are not the only reasons for hamstringing the induction of secularism into the Indian polity. There are other and more potent reasons too. The most potent

"One cannot preach secularism as a legal or logical dictate. Such a dictate is patently contrary to the fundamental concept of secularism. Moreover, secularism is a matter of heart and not of mind. It flourishes in a soil comprising compassion and piety. It dies in administrative or political fields."

reason obstructing the induction of secularism into the Indian polity is the constant proliferation of communal sentiments all over India. A look back over the communal incidents over the past four decades shows a steadily growing scheme among the fanatics who carried the religious standard but in fact, were having political ambition. Communalism became the bait for vote-catching. Communalism came to be exclusively identified with religious identity. Suddenly the people came to believe, and the belief was kept alive by the religious crusaders, that their religion was in danger of either extinction or of assimilation by another and larger religion. The feeling was not confined to the minority religions. It even infected the Hindu religion. Otherwise how one can explain the fear and the qualms of Hindus who are in brute majority in the country. Why

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rendezvous of science and religion

Who believe in secular approach, must be to remove the authoritarian, bigoted and fundamentalist character, both from religious and political authority. This is where democracy can play a major role. All intelligent human beings who believe in the process of enquiry, both in the sphere of science as well as spiritualism, must constantly preach, propagate and practise this approach of seeking harmony both in the political as well as religious sphere. Secularism, therefore, must not turn its back on religions, but on the contrary should try to find the common features and factors of human conduct enunciated in all religions and try to seek synthesised harmony between the followers of the different religions on these common factors of love, compassion, understanding, brotherhood, which have been preached by all founders. In fact, an effort can be made even to find commonality in religious practices of various rituals so that followers of different religions could understand each other better and could realise that behind the outer symbols of these rituals lies the fundamental need for brotherhood, harmony and happiness.

In this age, when on account of sheer incapacity of man to keep pace with the advances of science, the average man is trying to take refuge in the shell of religious fundamentalism, it should be the duty of all intelligent human beings who believe in the scientific, secular and spiritual approach—because secularism and spiritualism, as said earlier, are co-terminus—it is for such leaders of society to launch a worldwide campaign to persuade human beings to come out of their respective religious fundamentalist narrow shell and create a common platform by taking the best in all religions and evolving a common code of conduct for mankind. It is easier said than done because, as said earlier, it will mean a departure from blind, non-questioning acceptance to an open enquiring mind. This is where modern science and spiritualism, which are the foundations for secularism, can and must play an important role. □□□

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Educationists come forward

All this can only supplement but cannot suffice by itself. The text-books, teachers, school atmosphere are the most important agencies for generating, promoting and sustaining of secular feelings and atmosphere of fraternalisation among young folk while they are in their formative stage of schooling. Hence the pivotal role to be assumed in furthering secularism by the N.C.E.R.T. and Teachers, Colleges and Organisation of teachers and Central Educational Leaders.

We have to do our best to win the cooperation and partnership of such powerful social organisations as the N.S.S., Scouts, Christian Sunday Schools, Jamia Millia leaders. Even if they agree not to counteract whatever the Ministry for Human Resource Development and National Integration Committee try to do, through reorienting schooling, text-books and production of literature, highlighting the need for achievement of secular social comraderie between all religious and communal peoples, and their children it would be enough. From that foot hold all levels of eudcationists can proceed to spread the cult and create the practice of secular and national feeling and habit of universal social unity and brotherhood. □□□

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castelessness in public life

In the short run, that is in the immediate present, there are a number of actions that can be taken by each of us to practise secularism, even as the theory work on it is going forward. A first is for us to drop all caste and religious nomenclatures in our names. There is already a move in this direction among some groups. This should be widened till gradually we do not have the caste or religious suffixes or prefixes— Mudaliar, Aivangar, Chettiar, Nadar, Naqvi, Muni, Reverend or Right Reverend. This might go along with dropping caste marks and external religious appurtenances like beards, turbans, caps, crosses etc. A second imperative is that candidates who are chosen for award of an electoral ticket by political parties should be chosen without regard to caste or religion. The same religion/caste neutrality should apply to employment and admissions to educational institutions. This is a matter on which every one, particularly our young people, are watching us and our behaviour. We can go on teaching secularism, integration, nationalism in our schools and colleges and in political platforms till we are blue in the face, but when they see that the caste or religion of a man decides whether or not he is given a political party ticket, or a job or a seat in the LKG or in an engineering or medical college, no amount of teaching and preaching about secularism will convince our young people. It would also be desirable for government, and state dignitaries not to advertise or allow publicity on their visits to religious leaders and religious places, and for Doordarshan and AIR to be more secular in their programmes.

community solidarity

Perhaps the worst obstacle to secularism in a united India is that the secularism that we proclaim in our Constitution is blatantly denied in the lack of socialism also proclaimed in our Constitution. As a nation and community we are not one secular socialist people, we are really two people— a minority who are well to do, have all the comforts and luxuries of life including property and assets in various forms, and a majority who are ill to do, who live at or below the margin of subsistence, and who are totally assetless. One way, and for me the only way, to promote secularism in practice is for each of us to join as a community to both eliminate this scandal of mass poverty and

destitution, and the assetlessness of the poor majority—to whom God appears in the form of bread. Breadlessness then for the majority in the country is godlessness, which makes secularism an unnecessary, hypocritical, hollow and empty slogan for that majority.

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the process of nation making, have been using communal and caste divisions, to subserve their own games to undermine the unity of the working people, peasantry and intelligentsia. It is to be recognised that Secularism can survive only in an atmosphere permeated with unfailing sense of togetherness and oneness of Indian nationhood. Never since the independence, secular values have been confronted with such grave danger, as it is today.

The forces of communalism and separatism, have been on rampage. Religious fundamentalism has launched vicious attacks on secular values, traditions and heritages inherited by us, from national freedom struggles.

The very basis of our secularism is being challenged today. We hear loud demand that India be declared a Hindu State, and that minorities should adjust themselves to such condition Again some are also demanding independent theocratic States The Sikh fundamentalist forces have come out openly with the slogan of separate Khalistan. They have declared all political organisations among the Sikhs as irrelevant and are using the Sikh Shrines for anti-national activities. The Sikh masses could not be yet persuaded to accept the need of delinking religion from politics.

The caste system and untouchability continue to remain a blot on the face of independent India even today. The atrocities on the schedule castes and tribes persist as a constant phenomena of our public life Obscurantism thrives and is in full play. The perpetration of 'Sati' and mobilisation of people in support of this barbaric act, put this great nation to shame.

All these imperil the secular values of the nation. Patriots and democratic minded people can ill-afford to ignore these threats to Secularism. India can live only as a secular State India, denuded of Secularism, shall die

Let us not forget that Secularism is not merely a semantic expression. It is a social way of life. This needs to be built up brick by brick through sustained mass movements. A secular state should not remain neutral of the movement, a vigorous participant it must be. ☐

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Fusion of religions

What was of at least equal importance was the impact on both the intelligentsia and the masses. It united them on the basis of their respective identities in which religion and different religions at that were fused with a sense of India and of India in the world. There could be no better tribute to this great soul than that though India was divided, our national anthem as well as that of Bangladesh were composed by him. Subhash Bose and Sheikh Mujib both found inspiration and even speech and idiom from him.

This great spiritual secular tradition was taken up and enriched by Pandit Nehru. It is sometimes wrongly understood that for him secularism meant only the scientific temper. It did mean that for him but not only that. Of course, it also meant the separation of state and politics from religion. But it further meant equal treatment to all religions. This goes beyond toleration to stressing the composite nature of our spiritual makeup. This is not "religious secularism" nor is it a compromise with communalism. It is secularism in the Indian context at a specific moment of our historical evolution as a nation which is also a civilisation.

It is only fair to include among the makers of Indian secularism, the Communists. We have done many things about which we have to be and have been self-critical sometimes not deeply enough and at other times overshooting the mark. But never have the Communists wavered in being secular. The mistake of some of them sometimes was the failure to realise the importance of the struggle for secularism as a precondition for the advance towards socialism. Another mistake was to equate secularism with the scientific temper and consequently failure to appreciate the work of those secularists who did not accept the outlook of science. Yet the Communists have taken up arms against the Communalists unflinchingly and inspired lakhs of others to do so. Their organisation and work has always strengthened secularism, except when wrong politics has led them astray.

All those who respect the makers of Indian secularism are a fraternity. They have a common past and they must unite to make a common future.

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Society is currently under very great strain. All minority groups under garb of defence mechanism, are resorting to various types of revivalism and fundamentalism and the very edifice of our glorious composite culture built by various communites of Indian citizens over a period of centuries is being torn asunder. Everything signifying the composite non-communal culture is either being devalued or re-interpreted as forming part of a particular religious group. Thus Urdu language and literature, a product of a composite culture, is being

throttled and Kathak is being reinterpreted as belonging to a Sanskrit tradition and not to the innovations of Wajid Ali Shah's Awadh Court.

Thus secularism is no academic question for an underdeveloped country eager to accelerate the pace of its development so as to bridge the gap of centuries in the span of a few years. Secularism is its only hope of survival for a correct and balanced view of secularism alone can give the emerging nation a sense of perspective and release it from the clutches of religious bigotry, fundamentalism and revivalism and inculcate in us scientific temper so essential for industrial and technological advancement in the modern world. ☐☐

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The basic issue therefore is to look in to the nature of the Hindu society, the historical and contemporary pressures upon it, the economic compulsions which motivate the vast majority of people and so many other factors which have a bearing upon the situation. In other words, there has to be a greater feeling of self-confidence on the part of the Hindu majority This feeling will come only when the country is growing economically and no one is made to feel that. he or she is being discriminated against. This feeling of self-confidence on the part of the majority can in turn impart a feeling of security to the minorities.

What is of overriding importance today therefore is to investigate those various factors which have bred the psychology in the majority community of feeling threatened. This feeling is not entirely confined to what is called the Hindi speaking belt. It is to be found even in the neighbouring states of Gujarat and Maharashtra and to some extent in some of the more remote parts of the country as well. Its roots however and its basic strength come from the Hindi speaking belt. Is it a coincidence that it is these very parts of the country which are the most under-developed. The link between under-development and the feeling of insecurity,thus is neither illogical nor so difficult to understand. ☐☐

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lines. The history of this country is replete with instances of Hindus and Muslims fighting shoulder to shoulder against the common adversaries. Where is there the conflict of interests of these two communities? India with its democratic set-up gives ample opportunities to every section of the society to seek fulfilment of its legitimate aspirations and participate in the national endeavour. No doubt, the political system has gathered a little dross on the way but enlightened national leadership is well aware of it and is engaged in removing the dross and making it as vibrant as it should be. The efforts being made to separate religion from politics constitute a major initiative from the Government in this direction.

The people of India have a common destiny. Th may profess any faith, pursue any ideology, but th have a common goal. That goal is to make India stro Fissiparous tendencies are there; violence and bloodsl are there; social degradation and economic exploitat are still going on; these, and many other things, doubt, disfigure the fair face of mother India. I alongside these, one also finds a deep and abiding fa in the impoverished millions in the destiny of India; finds a deep commitment, howsoever inarticulate it m be, in them, towards a secular India. It is t faith and commitment of the common people of In which has to be strengthened. At the different level national endeavour, the process of secularisation has go on. Politics and political activists, I feel, have a m important role to play in it. The realisation of this r by the political movements in the country is a s guarantee to building a truly secular society. ☐☐

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should the Hindus be on the defensive ? Why should Muslims consider themselves as a minority and no second large majority ? Why should Sikhs feel that th religion is under threat without any reported instan of forcible conversions ?

The situation that prevails in India today, that extreme communalism, is the direct result of t factors. First, the opportunistic politics, which fou that the poltical use of religion can get them capt votes; and second, the economically frustrat intellectuals who want to make their mark by bear the standard of communalism. Both the elements not only the enemy of the Indian polity with religi diversity which incidently is still the most stable pol in the Third World countries, but also destroyer of hard won freedom by the Indians. We should not a forget that when we talk of fundamentalism or relig backlash, we are cutting the roots of secularism. T two terms belong to the medeavial era and are hallm of the fanatics and the crusaders. These do not fit w the ideology of an enlightened society.

It will be fatal if we accept setting up of so many ser by various religious fanatics simply as a 'backlas Such senas are always anti-national. The nation m come first. Because our identity, whatever it may religious, political or social, directly depends upon liberty. If we do not have liberty we do not have identity but that of a slave. Certainly no Indian wants be slave again. At the same time we must remove fear that secularism means relegation of religion to backyard, Let the people be religious first and th secular. Let not secularism take precedence o religion. Because only religion teaches toleran Because the type of communalism that we are pester with at the moment is not a very dangerous communalis It is simply a vote catching device. But if t communalism grows into fascist populism or rac nationalism then we have had it. Therefore, let seculari be the individual choice, a chocie by free will and not imposition. Only then Secularism will prevail. ☐☐

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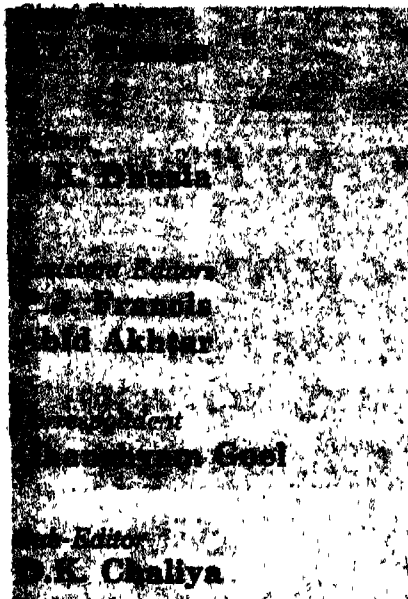
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Non-conventional energy : the tasks ahead

G. Srinivasan

About 42 percent of the country's total energy requirement is met by non-commercial energy sources. The author here feels that if the country is to achieve self-sustainability in the energy needs, then it will have to rely more and more on renewable sources. He examines here in detail various on-going programmes of harnessing non-conventional energy sources as well as various forms of renewable and new sources of energy.

ALTHOUGH THE CONTRIBUTION OF non-conventional sources of energy, in aggregate terms, to the total energy supplies in the country may be only marginal in the short-run, it is universally known that if they are planned to take due advantage of specific location and load charateristics they can become viable too. This is all the more crucial now than before because over the years the country must rely more on renewable sources if a modest beginning of a transition towards self-sustainability in the country's energy needs is to be made.

The Seventh Plan (1985-90) has taken within its purview the total energy needs of the country. In terms of numbers and quantities this is the largest challenge. Nearly 42% of India's total energy requirement is met by non-commercial energy sources such as fuel-wood, agricultural and animal wastes and this principally encompasses the rural India comprising nearly six lakh villages and 120 million households. Before a detailed examination of the various ongoing programmes of non-conventional energy sources in the country is attempted it is necessary to examine the various forms of renewable and new sources of energy.

Renewable energy sources fall into three broad categories: (a) biomass in its traditional solid forms (wood and agricultural residues); (b) biomass in its non-traditional form (converted into liquid and gaseous fuels); and (c) solar, wind and mini-hydro installations. In India,as in other developing countries, the demand for fuelwood, the most important source of traditional energy for residential uses, including cooking, has grown far faster than supply. Though the resultant fuelwood crisis has already touched serious proportions, technically and economically sound means exist both for reforestation and for improving the efficiency with which wood and other fuels are burned. It is pointed out that the use of fuelwood can be made more efficient through the design and dissemination of improved stoves. It is in this context that the mid-term appraisal document of the Planning Commission has said that the two "practicable" programmes which were taken up as national programmes in the Seventh Plan were for biogas and improved chulhas. These programmes are making good progress and the annual plan targets have been exceeded Planning Commission is of the view that these programmes would result in considerable saving of fuel wood as well as chemical introgen as fertiliser. Be that as it may, the Commission is candid enough to concede that the potential for these programmes is very much more than the Plan targets and the coverage to be attained. "New mechanisms to realise this potential will need to be devised and put in place. Among other things, this may involve changes in the present pattern of subsidies and greater emphasis on maintenance and training. These programmes are also in need of technological inputs to raise efficiency, improve reliability and cut costs," the Commission contended.

Biomass, a mixture containing 55-56 per cent methane, can be produced from the decomposition of animal, plant and human wastes. It can be used directly in cooking, reducing the demand for firewood. Moreover, the material from which biogas is produced retains its value as a fertiliser and can be returned to the soil. Besides, partial combustion of wood or other carbonaceous material such as straw, nutshells, coal, bark, or rice hulls produce a gaseous mixture ("producer gas") with a low calorific value, which can be burned in boilers designed for liquid or gaseous fuels or filtered for use in internal combustion engines. Producer gas can be used as fuel in agro-industrial plants with substantial residual materials. It is axiomatic that the production and use of both biogas and producer gas are viable much more widely in the rurul areas, given funds for research and developments, incentives for industrial experimentation and an effective extension mechanism.

The boost

The Department of Non-Conventional Energy Sources has in its 1987-88 Annual Report claimed that

the year under review witnessed a further step up of various programmes of new and renewable sources of energy together with consolidation of previous year's achievements. It said that research and development, both basic and applied, was given particular impetus in all area alongwith quick translation into practical projects and field programmes as also expansion of widespread use of development technologies such as biogas, improved smokeless chulhas, solar thermal systems and solar photovoltaic applications for remote villages.

Biogas

In the national programme on biogas, according to the report quoted above, 2.01 lakh units were built in 1986-87 against a target of 1.50 lakh, marking an achievement of 33.7 per cent above the target. Although a reduced allocation of Rs. 42 crore was made for 1987-88, a target of 1.21 lakh biogas units was set. The report claimed that this target would have been reached since one lakh units were already set up till February 1988. Biogas plants showed a high average of about 85% functionality. What is noteworthy is that post-installation and maintenance received special attention and financial support upto Rs. 500/- for repairing and Rs. 300/- to non-govt organisations and private entrepreneurs for setting up plants on a turn-key basis with two years guarantee was continued.

No dobut, benefits flowing from biogas plants are vast and manifold. Over nine lakh biogas plants have now been set up in the country. Assuming that 85% of these plants function and for only 80% of the year, it is estimated that there is an annual production of 918 million cubic metres of gas, equivalent to the saving of 31.8 lakh tonnes of firewood per year valued at Rs. 127.3 crore per annum. Moreover, these plants are producing 153 lakh tonnes of enriched manure per year containing about 3.06 lakh tonnes of NPK valued Rs. 126.7 crore per year. In a nutshell, it can be safely said that biogas plants generate massive economic gains and help upgradation of environment apart from ameliorating the living conditions of rural folks, reducing the monotony of women and improving their health due to provision of clean and smokeless kitchen.

Improved chulhas

On chulhas, the report said that as against a target of 6.5 lakh improved chulhas, 9.05 lakh chulhas were installed in the year 1986-87, registering an over-achievement by 49.5 per cent. In 1987-88, 9.13 lakh chulhas were installed upto February, 1988 and the target of 12 lakh chulhas would have been easily achieved. The report claimed that by the end of the year 40 lakh improved chulhas would be installed all over the country which are likely to yield a saving of 28 lakh tonnes of wood equivalent to Rs. 112 crore per year.

The needed priority

Considering the achievements so far made in biogas, there is need for promoting biogas on large-scale as a source of replenishable energy in rural areas. As such, it is desirable to lay down priorities for the allocation of resources on a regional basis. These priorities ought to be based on the availability of animal waste, the climate and seasonal conditions propitious to the generation of biogas, the need for energy in a particular area with reference to access to alternative sources of energy and also the institutional readiness to execute construction and maintenance of large number of biogas plants. Apart from concentrating on rural areas, the biogas popularisation needs to be made in selective urban areas too. Urban liquid wastes, that is, municipal sewage can be anaerobically fermented to pan out biogas for meeting both domestic and industrial needs. This programme could be initiated in major cities and towns.

Wind and hydro power

Solar, windpower and mini-hydro technologies constitute a third source of renewable energy. A firm technical basis exists for small hydro and windpower projects, and they seem to be economically attractive for suitable sites, but there has been little recent experience with them and much more exploration of sites is needed to assess their potential role, the World Bank said in a document on "Energy in the Developing Countries", published as far back as 1980. Photovoltaic (PV) cells, which convert solar energy directly into electricity, appear technically well suited to many applications because they promise to be long-lived and relatively trouble-free in operation. While listing out that there is a host of other projects for developing new and renewable sources of energy such as solar,thermal, photo voltaic, wind energy, wood gasifiers and so on, the Planning Commission rightly said that these programmes are in various stages of development. Cost per unit of power generated is very high and heavy subsidies are entailed. Until these technologies attain a level where they are inexpensive, and can be domestically replicated and commerially viable, they cannot make an appreicable dent on the very large requirements of energy needed to replace the present non-commercial energy uses.

Solar energy

It is, however, heartening to note that the Solar Thermal programme has progressed in various fields. namely, development, testing and adoption of technologies for various uses particularly in successful commercialisation of low grade solar uses particularly in successful commercialisation of low grade solar thermal technologies. Three solar milk chilling plants of capacity 5000 litres per day (lpd), 400 lpd and 200 lpd are under installation at Bilaspur in Haryana, Wardha in Maharashtra and Bharatpur in Rajasthan respectively. A solar kier of 20 kg. capacity has been developed for processing of cloth which may find wider utilisation in the handloom sector. Besides, solar photovoltaics is emerging as a strong option for meeting small electric power needs quickly in remote and isolated areas. Such power is being purveyed for multiple applications even for Railways, paramilitary forces etc., Solar photovoltaic has provided 5692 street lighting systems upto Feb

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Alternative energy option

M.M. Lal

Conventional power projects need long gestation period and involve time and cost over-runs too ! How to meet the growing and immediate energy needs of the increasing masses and industries ? The only way out, in the opinion of the author, is the accelerated use of non-conventional sources of energy like biogas, solar and wing energy, biomass and other organic manure. He gives here an account of the steps being taken to popularise the use of various kinds of non-conventional energy sources with the huge investments and the achievements in them.

WHEN INDIA BECAME INDEPENDENT in 1947, the power generation capacity in the country was merely 1300 MW (megawatt). It increased to 1700 MW when **the Plan era commenced in April 1951. Now 37 years after, the total installed capacity has come to about 55000 MW, an increase of 32 times.**

Likewise, annual energy generated has increased from 5.1 billion units to 202 billion units, marking a rise of 40 times during the entire period so far

Though India has made strides in power generation, which any country can legitimately be proud of, the per capita consumption of energy still remains dismally low Whereas this figure for European countries work out to be around 7,000 Kilowatt hours, and over 10,000 Kwh in case of the United States, the per capita energy consumption in India is around 180 Kilowatt hours. Even this lowly figure does not give out a correct picture. Whereas energy consumption in urban areas is around 300 Kwh, it is around 39 Kwh only in rural areas, the habitat of over 70 per cent of the country's population.

Colossal investment

It has been universally recognised that energy is the prime engine for growth and economic development. In the past six Five Year Plans, a total of Rs.34307 crore had been earmarked for the power sector alone. During the current plan (1985-1990), an investment of Rs.34273 crore has been envisaged. Furthermore, the Planning Commission has earmarked an additional outlay of Rs 11200 crore for power sector so that advance action is taken for setting up power projects which will come into operation in the Eighth Plan. Even with the completion of Seventh Plan targets in terms of **capacity addition and power generation, power administrations expect a shortage of nearly 10,000 MW by 1989-90.**

A recent perspective plan, prepared by the Central Electricity Authority, envisages creation of a total capacity of 48,000 MW in Eighth Plan and 62,000 MW in1995-2000 AD to meet the projected demand for electric power. This will require an investment of nearly Rs.2 lakh crore in next 10 years, more than the entire investment allocated to the public sector in the Seventh Plan

The current exercises indicate that about 38,000 MW capacity is likely to be added in the Eighth Plan. This would mean that the gap between demand and power **supply will further increase.**

Conventional energy sources

It is a fact that as on today and for some years more, India will have to remain dependent on conventional sources of energy like coal and hydel. Oil, gas and atom are other basic materials for generation of energy. In recent months, the Government has cleared some gas-based power projects which can be put on stream rather quickly. But gas has numerous clients like fertiliser plants, etc., and it is not unlimited. Nuclear energy has yet to make its presence felt in real solid terms, though it has an ambitious programme to be carried out in the **coming decades. Diesel is a costly proposition for power** generation.

Big projects and problems

The rapid growth of conventional energy system has **not been without some problems. Heavy investment has to be made in the mining and transportation of coal. Establishment of large thermal, hydel and nuclear plants have attracted potests from some social action groups who are vigorously active in the country asking for review of decisions to set up high dams for hydel generation and irrigation, and focussing the attention of the people to the hazards of having nuclear power plants in the neighbourhood in the wake of Chernobyl**

and Three Miles Island accidents in the Soviet Union and the United States respectively in the recent years. The serious environmental problems have arisen due to the increased consumption of wood for fuel and other requirements leading to large scale deforestation.

Conventional power projects, it is said, require long gestation periods involving time and cost over-runs. There can be some merit in this observation.

The way out

What does all this add upto? Is there no way out of this situation? Yes, there is.

India is a country mainly comprising widely scattered villages and hamlets. To carry power to them, for their economic and social growth, is most necessary. The people living in rural and far-flung areas have to savour the fruit of economic development and growth. This requires development and exploitation of energy sources which are locally available in a decentralised manner.

There is a school of thought which considers that with the harnessing of sun, wind, biomass and biogas, agricultural and industrial wastes, it will be possible to meet the energy demand of people living in the countryside and far-flung hilly and tribal areas.

New initiative

Some initial steps were taken during the mid-seventies to develop the technologies for utilising these energy sources. In 1981, the Commission for Additional Sources of Energy was constituted to formulate policies and programmes for the development of new and renewable sources of energy and to coordinate and intesify R&D work in this area. A year later, the Department of Non-conventional Energy Sources was established to execute and implement various programmes relating to these energy sources. Besides policy formulation, planning and execution of these programmes, the activities of the Department include research and develpoment, prototype develpoment and testing, demonstration and utilisation of these energy technologies. The programmes are implemented with the active cooperation of State renewable energy development agencies, R&D institutions and industrial organisations, etc.

Several technologies and systems have become now available for providing not only clean energy at local levels but also several other benefits like environmental upgradation, conservation of forests, improvement in hygienic conditions and reduction in health hazards, generation of local employment and women's welfare, etc.

A major push to the new and renewal energy programmes has been given in the current five year plan which began in April 1985.

Organic manure & fuel saved!

With a central investment of Rs.338 crore in the last four years in setting up family-size biogas plants, improved chulhas, solar thermal and photovoltaic system and wind energy programmes, etc., it is estimated that saving in fuel and organic manure has been of the order of Rs. 340 crore per year. Those programmes have also generated employment of about 450 lakh mandays. The likely saving of energy from solar thermal systems would be of the order of 200 million units heat equivalent a year. In addition, 9.5 million units of electricity has already been fed in to the state power grids by the wind farms, and 13 lakh units of electricity is estimated to have been generated by photovoltaic systems already in use. Besides, over 2700 villages have been provided with street lights. Over 12,000 villages have been made smokeless with the installation of improved chulhas.

Biogas, boosting of

Biogas is the fuel generated through anaerobic digestion of organic matter. Dung from a large cattle population in the country provides a ready and acceptable organic material which is used in biogas plants. The gas generated is rich in methane, a readily combustible fuel, that can be safely used for cooking. The digested slurry from biogas plants is a useful organic manure for farms.

The advantages of biogas include provision of clean and convenient fuel, particularly for rural households, reduction in demand for fuelwood and kerosene, promotion of sanitation through efficient utilisation of animal wastes, and lessening the drudgery of rural women, and improvement in their health conditions. Finally, biogas utilisation has a beneficial effect on the environments by helping reduce deforestation.

TABLE-1

Biogas Plants: Yearwise physical Targets and achievements

Year	Target	Achievement
1981-82	35 000	21,401
1982-83	75,000	60,095
1983-84	75,000	89,300
1984-85	150,000	172,773
1985-86	150,000	190,000
1986-87	150,000	2,00,000
1987-88	120,000	170,000

Over 10 lakh biogas plants have been set up so far in the country. Assuming that 85 per cent of them are functional and generate four cubic metres of gas per day for about 300 days in a year, the total biogas generation is estimated to be equivalent of about 35 lakh tonnes of fuelwood per year valued at over Rs. 140 crore besides generating manure of over 161.5 lakh tonnes annually. Similarly, over 300 institutional and community biogas plants have been installed for providing energy for cooking and lighting for the village community.

Improved chulhas

In order to reduce the use of fuelwood, a few models of improved chulhas with higher thermal efficiency have been launched. Over 42 lakhs thermally efficient chulhas

have been installed so far, resulting in the saving of 28 lakh tonnes of firewood annually. The average cost of a fixed chulha is between Rs.40 to Rs.50. At present, the users are required to contribute only Rs.10 and the balance is subsidised.

In respect of portable models, manufactured by industrial units in small scale sector, a subsidy of 75 per cent of the cost is provided if the users belong to scheduled castes and scheduled tribes and for those living in hilly areas. The sbsidy is 50 per cent of the cost in case of others.

TABLE-2

Improved chulhas : Yearwise

Year	*Physical Target*	*Achievement*
December 1983 to March 1985	5 00	8.12
1985-86	10.00	11 22
1986-87	6.50	9 05
1987-88	12.00	15.18
1988-89	15.00	

The feedback of the implementation of improved chulhas programme indicates the success rate ranging between 60 and 90 per cent depending on the area, fuel availability, cooking habits and economic status of beneficiaries.

Solar energy

Most parts of the country receive five to seven Kwh per day of solar radiation for about 300 days in a year. The low grade thermal heat can be used for solar heating of water for domestic and industrial use, space heating, drying and water desalination, and the medium grade heat for cooking, steam generation and industrial air heating. The high grade heat is used for power generation. So far a total collector area of about 85,000 square metres has been created to cater to these applications. Over 92,000 solar cookers have been sold throughout the country, One small thermal power plant of 22 Kw has been set up at Salojipally village in Andhra Pradesh and another is under installation in the campus of solar energy centre near Gurgaon in Haryana. A project report for a 30 MW solar power station has also been prepared.

Solar photovoltaic technology enables direct conversion of sunlight into electricity. This is achieved by solar cells prepared from single crystals silicon wafers. The electrical energy generated during the day can be stored in batteries for use at night time or on a cloudy day.

Under this system, electricity is generated with no fuel and no moving parts. Besides being noise or pollution-free, these solar systems are set up easily and require little maintenance.

However, due to high initial cost and limited financial resources, the photovoltaic programme is largely in the demonstration stage. Nevertheless, benefits from this technology are making an impact. Over 10,000 street lights, 400 community lighting/TV systems, 800 solar water pumping plants in the range of 1 to 5 KW have also been set up at several places in Andhra Pradesh, Goa, Karnataka, Tamil Naidu, Tripura, Uttar Pradesh and Lakshadweep. Two larger plants of 20-25 KW capacity are under installation in Haryana and Orissa. A number of projects for further applications such as powering of rural telephone exchanges, microwave repeater stations, railway signals, treatment of brackish water have been sponsored.

wind energy

Wind is free and non-polluting energy source. A preliminary estimate of wind resource potential in the country indicates that over 20,000 MW of power generation can be harnessed from this source.

Prospects are considered good for the exploitation of wind energy as a cost-effective alternative to conventional sources of electric power and to diesel pumpsets for drawing of water.

At present, six wind power projects with an aggregate capacity of nearly six megawatt are working in Gujarat, Maharashtra, Tamil Nadu and Orissa. About 1 crore units of power has been fed into the state power grids. A pilot project for installing six generators of 90 KW capacity at six different locations is under implementation. Besides, over 2,000 windpumps for drawing water have been installed. Most of the windmills pump around 10,000 litres of water a day over a head of six metres at a wind speed of 10 to 12 Kilometres an hour.

TABLE 3

Wind Energy Programme

Year	*Wind pumps*	*Wind farms (for power generation)*
1983-84	201	—
1984-85	494	—
1985-86	342	2.20 MW
1986-87	365	1 43 MW
1987 88	326	2 12 MW
1988-89	500 (target)	6 70 MW (target)

About 40 wind monitoring projects have been taken up in Gujarat, Orissa, Maharashtra, Tamil Nadu, Andhra Pradesh and Rajasthan.

Biomass

Biomass, an ever available storehouse of solar energy, offers the most convenient natural route to meet the growing needs of the rural sector. It can be used in solid, liquid, and gaseous forms through direct combustion, carbonisation, liquefaction, gasification and other conversion system.

The research and development projects undertaken in this direction cover production, conversion and utilisation and conservation of different aspects of biomass.

The objective is to link the energy plantation programme with the power generation and water pumping through gasification technology. Over 11,000 hectares of land have been brought under energy plantation on

(Contd. on page 33)

Taking a mean value of 4.5% and combining it with the cost of capital discounted at the rate of 10%, the levelised annual charges amount to Rs. 1.22/KWh.

The effect of lowering or raising the discount rate by 2% has an impact of about 10% on the cost of WGE in the same direction. Similar impact is also found if the assumption regarding operating charges are altered to 3% or 6%.

In all these cases the machines have been assumed to offer a 20 years life.

The cost of WGE as a baseline case in this article may be assumed as Rs. 1.25/kWH.

It may also be noted that the prices of machines are what were paid during 1985 and since then, the currency conversion rates have changed. At present the typical cost for 100 kW units is upowards of Rs. 11,000/kw conforming to the market trends of approximately $ 1,000/kW. Also, these imports have taken advantage of exemption from customs duty.

Baseline cost of WGE

The baseline cost of elctricity is with reference to 20 km/hr mean annual wind speed sites. The cost of electricity is very sensitive to site mean wind speed since the energy available is proportional to the third power of the mean wind speed. Thus, a site of 10% lower wind speed average would produce 27% less energy. Consequently the cost of electricity would rise by 37%. Thus, cost of WGE at an 18 km/hr site would be Rs. 1.70/kWh. Although, this is rather high it helps in setting a lower limit on the acceptable site mean wind speeds.

It is accepted that additional windy sites do exist in the known windy areas such as Gujarat and Tamil Nadu. Based on a study of surface and upper wind data and personal visits to several coastal and inland sites, the author is tentatively constrained to conclude that mean wind speeds of the order of 20 km/hr are rather unlikely in other states on level coastal and inland terrains. Windy sites would probably be found in mountains of some of the states. But in the absence of suitable wind data from the mountains it is not possible to estimate the magnitude of wind energy potential as of now with worthwhile confidence.

Confining to level terrains, Gujarat and Tamil Nadu appear to be the main windy states. While making an estimate of the potential in these states one must recall the 20% of grid capapcity as the upper limit. Thus, the upper limit to which wind generated electricity can be accepted into the grids of these two states put together by the turn of the century is well under 10,000 MW. A more serious constraint, however, is the availability of land in the windy parts of the states. To generate 10,000 MW one needs not less than 2,000 square kilometres or 2-lakh hectares. The calculation is based on a figure of 5k MW/km 2.

The above estimates were based on 20 km/hr windy sites resulting in Rs. 1.25/kWh as the cost of WGE. There could be some doubts regarding the acceptance of bulk power at this cost. The doubt would be even more if one considers sites of 18 km/hr in whose case the cost would be Rs. 1.70/kWh. It is, therefore, difficult to recommend bulk generation of power from sites obtaining less than 20km/hr until the time windmills become significantly cheaper.

Cost through windier sites

It is interesting to note that much of the windfarm activity is concentrated in California. Among other reasons such as support of the law and tax incentives, one even more important, is the availability of winds averaging over 22 km/hr on some of the mountains and passes. In our context, the cost of WGE at a 22km/hr site would be under one rupee per unit. What are the chances of finding such sites in the plains or mountains of our country ? Any answer on this can only be tentative but is still needed.

Some sites in Gujarat are claimed to have shown averages of the order of 22 km/hr. But these are yet to be confirmed through standardised wind monitoring process. Such possibilities cannot be ruled out but they would only be somewhat rare and very much site specific. A similar site specific possibility in respect of mountains is rated higher. Even in USA, where long coastlines and vast plains exist, windfarms are not so common as in Californian mountains.

Why are winds stronger on some mountains ? One simple explanation is that at their top one could reach into stronger upper winds. Of course, the mountain should be an isolated one, preferably a narrow ridge oriented across the predominant direction of the upper wind. Isolated hills of moderate height situated in level terrain could also be equally effective. Existence of such a mechanism has been confirmed through a study in Karnataka Western Ghats.

Mountains are known to provide stronger winds if they form a gap or a venturi in the direction of the already strong wind. An excellent example in California is the San Gorgonio Pass. In our country, Palghat Gap near Coimbatore and Aramboli Gap near Kanyakumari, both in Tamil Nadu can be sited as examples where such accelerated winds have been confirmed.

In mountainous areas, local wind systems generally exist resulting from differential heating of valley floors and mountain slopes. Such local winds show a remarkable reversal in direction during a day-night cycle. Generally, these winds are feeble. Some such mechanisms appear to exist in our mountains but are yet to be confirmed.

Thus, a possibility of finding 20 km/hr sites in mountains is high since such winds have been found on Karnataka Western Ghats. Whether wind speeds in mountains/level terrains could be better than 22 km/hr is yet to be confirmed. We are thus constrained to accept a very low probability of reduction in the cost of WGE through discovery of *windier* sites. So, cost reduction possibilities may have to rely on cost

reduction of windmills themselves.

Lower cost through indigenisation

Windmills are known to show lower operating costs but initial costs are high. The cost of WGE is directly proportional to the initial cost of the windmill as well as the cost due to other elements of the project such as land, roads, foundation, cabling, transformer and switchgears, etc. In a large windfarm the cost on account of these factors is only a fraction of the total initial cost. Even in the case of a smaller 550 kW windfarm, the cost of windmills accounted for almost 70% of the total cost of the project. Thus, the cost of WGE is relatively more sensitive with respect to the cost of windmills and the main possibility of reduction in the cost of WGE is through cheaper windmills.

Is there such a possibility in respect of windmills installed in our windfarms? These windmills were procured under the situation of high competition, surplus manufacturing capacities abroad and with a possibility of finding a foot-hold in the Indian market. Exemption from customs duty for such imports have naturally generated hope.

Now, if these very windmills are indigenised would they be any cheaper from Rs 9,500/kw paid earlier? First of all indigenisation would reduce the cost of the project in terms of supervision cost paid to suppliers from abroad and, of course, the elimination of expenses on account of ocean freight. But a license production arrangement would involve payment of royalties which would neutralise these savings.

It may also be noted that these windmills have received probably the full benefit of large production volumes and, therefore, cost reductions on this count after indigenisation may not be feasible.

The price structure in our country, in general is not such as to make indigenous production of towers made from mild steel, or precision machined gear-boxes or generators with a lot of copper any cheaper than what is obtainable abroad.

There is some possibility of making cheaper fibreglass blades due to significant input of labour required in their fabrication. But the material is relatively expensive and coupled with the stringent of quality control, our cheaper labour may not ultimately result in a cheaper final product. A greater possibility may exist if the choice for indigenisation is made from a larger sample of windmills demonstrated quite successfully in Californian windfarms.

Choice of design

In considering indigenisation of windmills one should not go necessarily on the basis of what is available on convenient and competative terms today. The basis should rather be the intrinsic value of the design and technology. The materials and components used in the machines of today are quite similar. Most of the horizontal axis machines use fibreglass blades and a few types use wood-epoxy blades. Vertical axis types differ since they can take advantage of somewhat cheaper aluminium blades made through the process of extrusion. This process does not allow taper in the blade and vertical axis machines do not generally need tapered blades. A variety of gear-boxes, generators, control systems and towers are available abroad off the shelf and different choices have been made in different designs. Qualitatively they are quite similar. Their impact on the total cost of the system is by no means predominant. Some might be available indigenously. Others can be produced with the capability available in the Indian industry.

The differences are quite significant in terms of the design approach. Confining our scope among the windmills already demonstrated in windfarms of California, the following four types can be broadly identified.

Type-I This is a typical 3-bladed fixed pitch, stall regulated stiff tower configuration. This design is found in Californian windfarms in large numbers. Our windfarms are also based on such machines which are available from a number of sources in Europe and USA. Some amount of standardisation has already taken place.

Type-II This is a 2-bladed, teetered hub, fixed pitch stall regulated soft tower design. At present, there appears to be only one such successful machine but even this accounts for an installed capacity of over 42 MW in California. It is yet to come to our windfarms.

Type-III This is a different design due to the facility of blade pitching which is an expensive but better technique for power regulation. The higher cost of such a mechanism is not very significant in large machines. This is not a new method since it has been demonstrated in prototypes more than forty years back.

Type-IV This is a Darrieus type vertical axis design. The concept has its advantages in terms of doing away with yaw control, easy access to generator and gear-box which are mounted close to the ground. But its rotor requires more material and the efficiency is somewhat lower.

Table-1, gives information with reference to typical designs belonging to the four categories. The capacity of the machines are not necessarily in proportion to their rated power since in some cases a large generator is coupled to a not so large-a-rotor. A better comparison is in terms of the energy capture capacity of the rotor which is proportional to square of its diameter. However at first we may simply examine the figures in terms of weight distribution of these machines without paying attention to their effectiveness.

With reference to *Table 1*, the Type-I design appears to be the heaviest of all. It is particularly so in respect of the rotor and the nacelle which are expensive parts. In a certain sense this design represents a conservative approach of playing safe.

On the other hand, Type-II design is lighter in respect of all components. Rotor is lighter not merely because it

has two blades in place of three of the Type-I but each blade is lighter as well. The nacelle is also proportionately lighter than others. This is due to 'soft' tower approach which allows designing a tower for lower natural frequencies and consequently lighter in weight. Th approach of 2-bladed rotor is not accepted by some on the grounds of load asymmetry. But a teetered hub takes care of this at a small extra cost. These probably are the main innovations of the last decade in respect of horizontal axis windmills.

Type-III design falls between the first two in terms of the weight. It, however, offers a better chance of scaling-up into megawatt class due to pitchable blades as compared to the first two which have fixed blades.

The Type-IV does not seem to offer any special advantage in weight terms. To a large extent its potential is not yet realised.

In this comparison we did not include the efficiency of energy conversion. In doing this one cannot use the energy production figures provided by suppliers due to a standard site and make approximate calculations of energy capture based on the power curve provided by the supplier. The method used predicts the energy produced consistently on the lower side which should be acceptable in our comparative study.

In *Table-2*, the figures of merits are given in terms of kWh/m2 and kWh/kg. A more efficient design is the one which scores higher in terms of kWh/m2. Similarly, a higher figure of kWh/kg indicates a more effective use of the material.

Besides these four types of designs, some prototypes have also been included in *Table-2*. An all round improvement is quite evident in current designs as compared to the one constructed some forty years ago. Allgaier-Hutter design appears as a significant improvement well ahead of Type-1 although, it was designed some twenty years earlier. This, incidentally, was the first large machine to use fibreglass blades. The MOD-2 design showed the way of soft tower and 2-bladed rotor, although in itself, it was not a big success. Its rotor was constructed from welded steel plates and, therefore, a lower figure in terms of kWh/kg of rotor weight is actually comparable to others when converted into costs.

Now that the manufacturing methods do not significantly differ from one type of design to another the efficient utilisation of material could be taken as a principal economic criterion. Thus, it would seem that a better possibility of achieving a figure of Rs.[illegible]/kw exists in respect of Type-11 design due to a significantly efficient use of the material. Therefore, while making a deliberate choice in regards to indigenisation, the decision should go in favour of Type-11. At the same time, we should also consider Type-111 in view of its potentiality for future scale-up.

Enlarged potential for WGE

The potential for wind generated electricity is in reality much larger with reference to surface winds on level terrains. A significant potential probably exists on mountains which reach into stronger upper winds. This can also be done by setting-up windmill rotors on tall towers in level terrains. The main requirement is that wind at such heights in these places should be such as to absorb the additional cost of towers by higher energy production.

The mean annual wind speed requires a specification of the height of wind speed measurement above the ground level (a.g.l.). Usually, this height is 10m. a.g.l. Wind speed at the axis or the hub of the rotor is more relevant. Typically, this height is about 25m for 100kw machines. Taller towers reaching up to 100 m have been used in prototypes of large machines. It is a common knowledge that wind speeds are relatively higher as one goes up into the atmosphere.

Why are wind speeds better over so many places at 150m height and not at 10m height ? An explanation can be offered as follows. Strong winds generally prevail over the Indian sub-continent at a height of a couple of kilometres above sea level. For instance, wind speeds exceed 36km/hr over the bulk of the country during the winter. This is specially so in respect of higher altitudes. But surface winds are particularly low during the same season at most of the locations. Probably, the stratification of the atmosphere close to the ground level, which is a common occurrence during the winter, does not allow momentum of upper atmospheric winds to be transferred to the air near the ground. The layers at some height say, 150m do let better. In most instances almost 90% of the first highest mean wind speed of the atmosphere is achieved at this height of 150m.

An immediate possibility for taking advantage of winds at 150m.a.g.l. or about is by utilising low hills located in an otherwise level terrain. Such hills may be deemed to provide an extended tower at a cost of extra effort in transportation and erection of machines at the top of the hill.

Some of the currently deployed successful machines in windfarms of California such as Type-II discussed earlier have a relatively taller tower of the order of 50 metres. If the tower height is increased three-fold the cost would also increase quite considerably. But if the cost of such a machine gets doubled,it can still be tolerated. This is because a 30km/hr site is capable of producing 99% more energy as compared to a 20km/hr site. Since there are several such locations which were not earlier on the energy map, this approach should be pursued.

Prototypes of large machines,have been experimented earlier and some developments are being pursued currently as well. When such machines are developed and become cheaper they would be naturally able to take advantage of winds at about 150m height.

Another point in favour of large windmills is on account of a possibility of their deployment on single unit basis and not necessarily with the windfarm approach. Typically, a megawatt class machine would have a rotor

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the space and 70% reaches the earth's surface. Of the solar energy that reaches the earth 23% is absorbed by the oceans, but the wind waves and ocean currents which effect our life consume 0.3% of the incident solar energy, while that used for photosynthesis (the source of fossil fuel) amounts to about 0.03% and tidal energy amounts to 0.02%. The total energy that we use to sustain our present civilisation amounts to barely 1/60,000 of the solar energy that reaches the earth. Thus we have just touched the fingers of potential solar energy represents.

Techniques have been well developed for harnassing energy from the sun. One such techniques is obtaining electricity from solar energy by "Photoelectric effect" There are certain materials called semi conductors which are characterised by the presence of some free electrons which are loosely bound to the atomic system in crystal lattice. When light energy is incident on the surface of such semi conductors, it imparts a kick to these loosely held electrons to set them freely moving through lattice thereby resulting in a current flow which can be tapped. The most popular photovoltaic material is silicon. The photovoltaic assay converts solar energy into DC (Direct Current) output. This can be either diverted to an energy storage device such as battery or channeled for immediate use via power control device or fed into grid through an inverter which converts DC to AC. This is the cheapest method of electricity production.

Solar ponds

The Solar Energy Research Centre of the University of Queensland in Australia have established solar ponds. In a solar pond radiation is trapped by a combination of a transparent honey comb structure and silicon. To avoid dirt accumulation a thin membrane covers the top of the honey comb. A 600 square meter pond would provide a potential basis for extensive low cost industrial heating.

Solar ventilators are now used in Japan which prevent extraordinary rise and fall of temperature in motor cars. A joint team of Israel and Dutch has developed a cheap way to purify water which can be put to use in drought hit areas. The system is powered by photovoltaic cells. At dead sea solar energy is extracted in a very simple manner. Wide and spacious ponds are constructed and filled with Dead sea water. The water is separated into two layers. The very salty mass settling towards the bottom and the less salty remaining on the top. Sun light penetrates the upper most layer and becomes trapped as heat in the densest solution below which approaches the boiling point. The hot water is then pumped into a turbine house where it passes through a heat exchanger and vapourizes a special low boiling liquified gas. The vapour drives a turbine and generates electricity. Once the vapour has done its job it is condensed into liquid again by cooler water from pond's surface. This water is then returned to the pond. Now in India also, solar energy is exploited for several purposes.

Energy from the wind

Harnassing of energy from wind mill is the most fruitful field for exploitation. In UK. US, Holland, Sweeden and other countries wind mills have been developed to produce as much as 300 to 500 K.W. electricity. The wind power that is nature's gift can be harnessed to produce electric power, to drive a water pump for irrigation by using suitable wind mill farms we can make dry arid areas to produce crops.

Energy from the ocean

Water on the surface of the ocean which was at a temperature of 80 F was drawn into a heat exchanger that contained liquid ammonia under pressure. The liquid ammonia which has a boiling point lower than water was heated by the exchanger and converted into vapour that was directed against the blades of a turbine which in turn causes a generator to produce electricity. With the help of OTEC (Ocean Thermoenergy Conservation) technology, ammonia could be produced at low cost by the cheap electricity generated at sea which can extract hydrogen from sea water by electrolysis. Thus ammonia can once again be split up into nitrogen and hydrogen. Liquid hydrogen can prove to be a suitable replacement for gasoline in automobiles and could also provide power for fuel cells that generate electricity.

Energy from Biomass

Biomass is one of the largest reservoirs of solar energy, that traces its origin to photosynthesis — a process in which green plants change carbondioxide, water and nutrients into oxygen and various organic compounds. Biomass offers a natural convenient energy storage system in which energy can be held for relatively longer durations. Dried plant matter has an energy content by weight. Dried plant matter and other solid wastes are burned and the heat generated by mincineration plant can be used for producing steam. This steam can be used for industrial purposes. Unlike the burning of fossil fuels burning of dried plant material should not increase the carbondioxide content of the air since it is only returning carbondioxide that was taken from the air at a relatively short time earlier during the growth of the plant. Under anaerobic conditions fermentation of dead plant and animal material will result in the evolution of methane gas. The fermentation process generate 120° C to 150° F temperature and that can be used for specific purpose. Methanol and other hydrocarbons released during the process can be used for the operation of vehicles. Solid wastes of animal refuge garbage and other organic wastes are heated at 30 C in the presence of carbonmonoxide, steam and sodium carbonate. This would give 120 gallons of heavy oil in twenty minutes. The oil is used as a fuel which is free from sulphur and therefore causes less pollution.

Conservation of energy

The rapid hike in energy demands and costs made energy conservation a national priority. Improving the efficiency of energy production and use has been the focus of conservation research and development. In US through a process called "cogeneration" energy is conserved. Cogeneration is the production of two useful forms of energy from the same source. Steam produced in a factory's manufacturing process can be

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Solar Cooker—a non-fuel cooking device

A.N. Gambhir & G.S. Sood

Though India is a pioneer in the development of solar cookers (1945), the device is still at its preliminary stage and has not been widely accepted by the people. There is a need for certain level of improvement in the device and in its marketing strategy if the device is to pick up popularity, feels the authors. They conclude pinpointing the reasons for the slow diffusion of the device and suggest the required improvements and strategy to promote rapid diffusion.

THE FAST EXPANDING POPULATION BASE and multiplicity of wants at almost all levels has put an unbearable pressure on fossil fuels. The treasure of fossil fuels is fast depleting. Within 200 years of enormous use of energy, the world has realised the need for non-conventional and renewable sources of energy. These include solar energy, bio-energy, wind energy, geo-thermal energy, ocean thermal energy, tidal and wave energy, etc.

Research and outcome

Realising the need for non-conventional and renewable sources of energy, the Government of India launched an intensive research and development programme to convert these energy sources into usable energy and to develop devices and systems working on them. The Commission for Additional Sources of Energy (CASE) was set up in 1981 in order to provide impetus to the development of renewable sources of energy. Later on, the Department of Non-conventional Sources of Energy (DNES) was set up on 6th September, 1982 in the Union Ministry of Energy which replaced the Commission for Additional Sources of Energy.

The Department of Non-Conventional Sources of Energy explore the uses of solar energy more extensively in comparison to other forms of renewable energy. It is because of the fact that Sun is found to be most effective and efficient source of energy in India which has 260 clear days in a year. Solar energy is perennial and mos promising source of energy. Various devices have bee developed by DNES which can be operated and use with solar energy. Among these are the solar cooker solar heaters, solar cropdryers, solar timber kilns, sola pumps, solar distillation units, solar photovolatic cel etc.

Solar Cooker

Of the above mentioned devices, solar cooker ha come to be the most acceptable one in view of the fac that cooking is the most important household activit carried out by Indian housewives. They spend fairly goo amount of her time and energy on this activity. The tim and energy spent on cooking depends mainly upon factors: namely, (i) the type of fuel consumed in th kitchen, (ii) the efficency of the equipment used fo cooking, and (iii) food consumption habits and style o cooking. So far, the most common fuels for househol activities are charcoal, coal, firewood, kerosene cooking gas (LPG), animal dung cakes, human wast and agricultural waste in urban, sub-urban and rura areas. The stock of these conventional and non renewable fuels is limited and is not going to last long Moreover, various problems like inconvenience, risl involved, environment pollution, irregular supply etc are other hurdles which force us to identify othe sources of energy to overcome these problems.

The advantages

Solar cooker is a viable and promising technology fo cooking food which is likely to help in meeting futur domestic energy needs. It is a new kind of cookin device and does not require any conventional fuel fo operation as it works with energy, a free gift of nature. I is a device which gives no smoke and keeps th environment clean. It carries the distinction of safety simplicity, economy and preserving the environment Moreover, the solar cooker preserves the nutritio value of food as cooking is done on low temperature Hence, it is entirely a new kind of cooking device.

Types of solar cookers

India has been a pioneer in the development of sola cooker. The first solar cooker was developed in 1945 b

Mr. M.K. Ghosh of Jamshedpur, a freedom fighter. On account of its convenience and simplicity, the solar cooker attracted world wide attention. Unfortunately, it did not find much acceptance in our country because of the low cost and ready availability of conventional fuels and also the eating habits and resistance to change. But the fuel crisis of 1970s vitally affected the rural areas of developing economies drawing attention of scientists and policy makers to harness and utilise the solar energy in a big way. Various types of solar cooker may be classified into following groups:

1. Flat Plate Box-type solar cooker (Hot Box type)
2. Multireflector type solar oven;
3. Hybrid design of solar cooker;
4. Parabolic dish concentrator type solar cooker; and
5. Solar thermal storage for cooking.

It is the hotbox type of solar cooker which is commonly available in the market. This type of solar cooker consists of a well insulated box the inside of which is painted dull black and is covered by one or more transparent covers to trap heat inside the solar cooker. These covers allow the radiation from sun to come inside but do not allow the heat from the black absorbing plate to come out of the box. Because of this, the temperature of the blackened plate inside the box increases and can heat up the inside pans upto 140° C which are adequate for cooking.

Sale yet to pick up

The programme for the manfacture and subsidised sale of solar cooker in India was launched in November 1981 but the sale was actually started in April 1982. At present, the programme of sale of solar cooker is operational in 15 States and one Union Territory. The sale of solar cooker in these states and union territory is executed through agencies designated by the respective State Governments. In rural areas, the sale of solar cooker is being done by District Rural Development Agency and Agricultural Extension Workers who demonstrate the use of solar cooker along with other improved agricultural implements. In the Union Territory of Delhi, the solar cookers are being sold by 3 agencies viz; Delhi Energy Development Agency (Delhi Administration), Super Bazar and Mehrauli Farmers Cooperative Society (Mehrauli).

The manufacturing of solar cooker in India is subject to specifications/drawings cum-testing by the technical committee set by DNES. The number of approved manufacturers in India is gradually increasing over the last few years. Whereas the number of manufacturers at the end of fiscal year 1982-83 stood at 37 only, it rose to [illegible]0 by the end of 1984-85. By the end of 1986-87, the number of solar cooker sold in India was 72,000.

Sale promotional measures

Inspite of massive compaign and promotional measures undertaken by the Government it is clear that number of solar cookers sold in the country are very less. The various promotional measures undertaken by Governments— Central and State, for the diffusion of solar cooker are briefed below:

1. The Central and State Governments provide various concessions/exemptions regarding sales tax, excise duty and customs duty as fiscal relief for promoting the manufacturing and sale of solar cooker.
2. The Central Government has directed various financial institutions to provide direct loans to the manfactarers and users of devices based on new and renewable sources of energy. At present, manufacturers get such loans on soft terms basis at the rate of 12.5 per cent per annum.
3. The manufacturers are also permitted to avail of refinancing by financial institutions against their sales. Furthermore, financial institutions at lower level may avail the refinancing facilities from financial institutions at higher level.
3. To promote the sales of solar cooker, the Central and State Governments provide subsidies and loan facilities to the users of solar cooker. Central Government provide subsidy at the rate of [illegible] per cent of the cost of solar cooker and [illegible] cooking pans subject to a maximum of Rs. [illegible]. In addition to this, various State Governments are also providing subsidy to the users of solar cooker. The subsidy amount in various States varies from Rs. 75 to Rs. 150. In the Union Territory of Delhi the subsidy given by the Delhi Administration is 40 per cent of the manufacturer's wholesale price minus Central Government subsidy. Some States have also sanctioned schemes for the grant of loans to their employees for the purchase of solar cooker. This scheme is also prevalent in the Union Territory of Delhi.
5. The manufacturing as also the use of solar devices are sought to be promoted by permitting certain expenditures on research and development. The DNES is to spend maximum on research and development in order to provide appropriate technology to the manufacturers.
6. In order to promote the use of solar devices among the poorest section of the society, Government has permitted the banks to finance all DRI beneficiaries within the framework of the scheme so as to enable them to purchase solar cooker.
7. All manufacturers manufacturing non-conventional energy devices have been declared eligible for the existing deferred payment scheme of financial institutions.
8. With a view to encouraging exploitation of alternate sources of energy, Government have delicensed the manufacturing of equipments for exploitation of additional sources of energy.

Keeping in view the promotional measures by the Government, the number of solar cookers sold in the country (i.e. 72,000 by the end of 1986-87) could be said to be extremely low which is even far less than one per cent of the number of families residing in India. In order to analyse the slow diffusion of solar cooker and other related aspects, a study was conducted in the Union Territory of Delhi. Among other related aspects the main focus of the study was to analyse the features

of solar cookers presently in use with a marketing perspective. The main objectives of the study were:

(i) to analyse and examine the characteristics of users of solar cooker as innovators;

(ii) to study and examine the consumer response towards solar cooker, its price, its promotional strategy and distribution network;

(iii) to determine the extent to which characteristics of solar cooker match the characteristics of an effective innovation; and

(iv) to suggest the policy instruments that could be effective in accelerating the rate of diffusion of this innovation.

In order to realise the above mentioned objectives, a random sample of 100 consumers was conducted in the Union Territory of Delhi. The self administered questionnaire was analysed and inferences were drawn by taking the reliability of responses at 5 per cent level of significance. The main findings of the study can be grouped under the three broad categories viz.,

(i) Reason for slow diffusion of solar cooker.

(ii) The characteristics of users of solar cooker.

(iii) The marketing aspects of solar cooker.

Why slow diffusion of solar cooker

The following reasons have been identified for the slow rate of diffusion:

(a) The existing models of solar cooker are incompatible with the cooking habits of households in Delhi.

(b) The technical quality of solar cookers available in the market was found to be poor.

(c) The weight and sun tracking problem poses a serious threat to its wide diffusion.

(d) The device is poor on maintenance because of the non-provision of satisfactory after sales service.

(e) The drawback of non storing of solar energy i.e. use of the device in the odd hours is also found responsible for its slow diffusion.

Characteristics of solar cooker users

All the users of solar cookers in the Union Territory of Delhi have been viewed as innovators, their characteristics in the sphere of economic, demographic, communication and social mobility have been identified and summerised below:

(a) The majority of the users of solar cooker have been found to belong to the middle and and high income group (i.e. with a monthly income of Rs. 2001 and above).

(b) The users are found educated (Hr. Sec./SSE or above) and in the service/occupation. The decision of buying the solar cooker is housewife dominated with the age of above 30 years. Besides, the size of the family of the users have been found to be small (i.e. 4 or less members).

(c) The personal media (demonstration, trade fair, exhibition etc.) are found to be very effective in imparting 'first hand' information about the device to its potentional customers.

(d) The users of solar cooker have shown a low degree of social interaction.

Marketing aspects of solar cooker

The solar cooker has been tested from the angle lof four P's of the marketing mix, i.e. product, price, promotion and place (distribution). The results obtained for the analysis of consumer responses are highlighted below:

(a) The product (i.e. solar cooker) is found partially useful as it cooks the food with better taste and nutrition. The product is found poor on benchmark of relative advantage to other cooking devices as some of the food types cannot be cooked in solar cooker. But the product is found satisfactory on front of its operation and observation.

(b) The subsidised price of the solar cooker is found reasonable. It has been pointed out that if the price subsidy of the device is withdrawn, the product diffusion will be greatly retarded.

(c) Large number of promotional measures have been taken by the Government of India, yet a small segment of respondents are found with lack of knowledge of its operation.

(d) Distribution network is highly selective and narrow. Large number of entrepreneurs are required to be backed by the efficient and quick aftersales service in order to enhance its diffusion.

Recommendations

The study is followed by number of suggestions which come out as important recommendations for its wide diffusions. The suggestions have been divided into 3 main points.

(1) Recommendations regarding product research and development activities.—

(a) New models of solar cooker should be developed which can cater to the demands of different people who differ in their food habits i.e., wheat-eaters, non-vegetarians, rice-eaters, etc.

(b) 'Auto-track' solar cooker must be developed which does not require tracking with sun.

(c) New models which can store the solar energy (even for few hours) should be developed so that the device can be used at odd hours.

(d) Different sizes of solar cooker should be developed which can cater to the demands of different family sizes.

(e) Large sized solar cookers should be developed for institutional users like restaurants, dhabas, hospitals, hotels, etc.

(2) Recommendations for existing models

(a) The size and weight of the cooker should be reduced so as to make it less spatial and more handy.
(b) The wheel should be fixed at the back of cooker so that it can be kept in standing position.
(c) The quality of the black paint coated on utensils and absorber tray should be of better quality. Rather, improved quality of utensils are to be supplied with the cooker.
(d) The heat resistant rubber sheet should be used in order to have better alignment between the box and glass frame.
(e) Water should not be allowed to leak into the box.
(f) The quality of material used in the cooker should be strong enough as the device is equipped with two glass frame.
(g) Hand-gloves should be supplied with solar cooker to avoid hand burns.
(h) Container-carrier should be supplied so that hot-containers can easily be carried into the kitchen.
(i) The device must be equipped with some system which can turn the cooker after some time. If possible, this drawback should be removed.
(j) Any sealing of the glass surface will ensure the increased efficiency as water vapours accumulate in the cooker.
(k) A colourful pictorially illustrated handbook should be supplied with every cooker stating how to cook and what to cook in solar cooker.

(3) Recommendation regarding promotional strategy

(I) Intensive distribution of the device should be developed. The following points should be taken care of for intensive distribution:
(a) Distribution through oil and LPG supply agencies should be made with the help of public sector companies.
(b) Cooking competitions in selected educational institutions like women's polytechnic, nutrition colleges etc. should be organised.
(c) Wholesalers in private sector supported by efficient after sales service and dealer network should be brought forward.
(II) Demonstrations of the device should be held at mass level. Besides, people should be properly educated about its various uses.
(III) Mass media should be used to create awareness among people about its use.
(IV) With the existing model, the Government should concentrate its efforts to those areas where the firewood, kerosene oil is in dominant use for cooking. Also to those areas which are rice-dominating with aboundance of sunshine.

Conclusion

The study reveals that solar cooker has some virtues of usefulness of a new product. The device is still at the preliminary stage of testing in India. There is a need for certain level of improvement in the device itself and in its marketing strategy. The study tries to pinpoint the reasons for slow rate of diffusion of the device. The reasons identified are within the reach of our business firms, technicians and policy-makers. A low cost strategy to promote the rapid diffusion of this innovation in selected parts of the country can pay rich dividends in terms of energy conservation. If policy makers understand the message of this study, in the years to come a whole new self-reliant solar cooker industry can emerge in the decentralised sector to serve the needs of millions of poor and low income households and the device may occupy main place as the latest and most popular source of energy for cooking purposes. □□□

(Contd. from page 16)

used to produce electricity. This electricity can be used at industrial site where it is produced or it can be distributed to other sites. The steam produced in a factory's manufacturing process is piped to nearby homes where this heat can be used to heat the space or water.

Energy banks

Energy banks occupy an important place in conservation of energy. Experts believe that by the year 2000 about ten per cent of the entire energy generated in the world will pass through energy banks. These specific energy banks will make it possible to use solar energy in the night time, the energy of wind at calm and electrical energy of large power stations generated in half peak time, in hours of maximum load. There may be many types of energy banks as there are forms of energy. Electrical, chemical, mechanical and thermal. Electrochemical banks are the widely known conservation devices. They are installed in every automobile vehicle in pocket calculation and hearing aids.

Beside all the technical advancements we should not forget one important aspect that is: educating the common man about the importance of energy conservation. Otherwise the entire technical advancement will become a mere waste. The coordinated activity of both scientific and social communities is very essential. If we do not save and conserve energy,the gradually depleted energy sources will adversely effect our future needs.

Nuclear energy : prospects by 2000 A.D.

Mohan Chandak

An additional 10,000 MW of nuclear power capacity is to be added by 2000 A.D., according to a plan drawn up by the Department of Atomic Energy. This would call for investment of at least Rs. 10,000 crore. So far India has set up atomic power plants at Trombay near Bombay, Kota in Rajasthan and Kalpakam near Madras. Narora in U.P. and Kaiga in Karnataka are fast appearing on the nuclear power map of the country. Here the author discusses the country's nuclear power programme, for the present and the future, and what is being done in other countries in this sphere. With the growing demand for energy, the author feels, the country cannot afford to dispense with nuclear power and will have to develop this resource to the fullest possible extent.

MAN'S EFFORTS TO MASTER the nature are largely based on his ability to control and develop various sources of energy. Since the dawn of civilisation man has been growing more and more energy hungry. Till the beginning of the industrial age, mother earth was able to easily support the energy needs of her population without much strain, but, in came the steam engine and man's energy needs began to grow exponentially. In the past two centuries man has depleted the natural energy sources at such a breath-taking speed that the coal, oil and gas reserves are fast coming to an end. In man's search for the alternative sources of energy, the nuclear energy is an important lanmark.

what is nuclear energy ?

Theoritically, it was known for quite sometime that the nuclei of some heavy atoms, when bombarded with neutrons, break into smaller parts releasing huge quantity of energy. It was Enrico Fermi, who in the Manhattan project of making nuclear weapon during the Second World War, could first achieve the controlled production of energy through fission of Uranium nucl There is very small loss of mass during the breaking 'fission' of the nucleus which is converted into ener according to Einstein's famous formula, E-MxC² whe E is the energy produced with the loss of mass M and is the velocity of light which is about thirty thousa million centimetres per second - a huge quantity which to be squared! No wonder, large amount of energy produced with the loss of a small quantity of Mass.

India's nuclear energy programm

Fortunately, after independence, India's nucle programme got an early start, mainly because of t vision of the Indian leaders. India's first Prime Minist Jawaharlal Nehru had said, "I had no doubt that just we were affected by the advent of steam and the elect power, the advent of nuclear power in the next 10,15, years will make a vast difference in the running of o factories."

The Atomic Energy Commission was formed in early as 1948.

In fact the energy sector as a whole has been giv increasing importance throughout the Plan period can be seen from Table 1

Table I

Increasing share of energy in the toal plan outlays: 1951-1990 (in Rs. crores)

Period	*Plan outlay for Energy*	*Total Plan outlay*	*% of Ener Sect*
First Plan 1951-56	583	1960	29
Second Plan 1956-61	487	4800	10.
Thrid Plan 1961-66	1293	8095	16.
Annual Plans 1966-69	1213	6625	18
Fourth Plans 1969-74	2867	15902	18.
Fifth Plan 1974-79	10132	39288	25.
Sixth Plan 1980-85	26535	97500	27.
«Seventh Plan 1985-90	54821	180000	30.

**Figures include outlay for irrigation*
+Targetted

India's first nuclear power station, Tarapur ne Bombay, has two reactors & 210 MW capacity each. went operational way back in 1969 These reactors we of the boiling water type. Two more reactors of 220 M

each were built at Kota in Rajasthan. These were of the pressurised heavy water type. The first went into operation in 1977 while the other started feeding power in1980. Two more units of 235 MW each are operating at Kalpakkam near Madras.

However, the power generated by these three stations is less than three per cent of the total power generation from all other sources.

Planning for the future

The Department of Atomic Energy has drawn up an ambitious plan of installing 10,000 MW of capacity for nuclear energy by 2000 AD .This plan will need a massive investment of Rs.10,000 crores by the turn of the century. To raise resources, a Nuclear Power Corporation has been constituted last year. Registered under the Companies Act, the coporation will raise funds from public by issuing bonds etc. Its first issue was oversubscribed.

Six more units of 235 MW capacity are coming up at three stations. These are Narora in Uttar Pradesh, Kota in Rajasthan and Kaiga in Karnataka.

Besides,recently in July'86, the Government approved advance procurement from industry for ten nuclear power sectors. Of these four will be of 235 MW each and six 0f 500 MW each. Simultaneously, uranium mining activity, full fuel fabrication facility and heavy water production will be stepped up.

The Government is also in the final stages of getting nuclear power reactors from the Soviet Union and surveys are on to locate suitable site for them.

With all these developments, it is expected that the goal of 10000 MW of capacity for nuclear power by the turn of the century seems to be within our reach.

Fast breeder technology:

The basic fuel for nuclear reactors is a variety of Uranium-U235 which occurs only as a very small fraction of the naturally occuring variety U238. Moreover, the total uranium reserves of India are limited. However, India has abundant reserves of another nuclear material thorium, which can be used in reactors with some modification of techniques. The first stage of this technique is the fast breeder reactors which use the plutonium formed from non-fissile U238 in the first stage. The products of the second stage U233 will then be used in the third stage with thorium to give for more energy than any other source can give. The former Chairman of the Atomic Energy Commission Dr. Raja Ramanna, in one of his lectures has estimated that Uranium in fast breeder reactors will produce 100 times more energy than uranium in pressurised heavy water reactors (PHWR) while thorium will produce 600 times energy value of that of uranium in PHWRs (Table 11).

Already a fast breeder test reactor is working at Kalpakkam and a 500 MW fast breeder reactor is being designed. It is likely to become operational by 1997.

With all these developments the share of the nuclear energy by 2000 AD is expected to go up to ten per cent of the total.

Table II

Energy Resources in India

Resource	*Quantity (in billion tonnes of coal equivalent)*
Coal	112
Oil	0.6
Gas	1.5
Hydro per year	0.16
Uranium in PHW	1.2
Uranium in Fast breeder Reactors-	100
Thorium	600

On the global scene

The present contribution of nuclear power in the total power generated is about 17 per cent.

Despite an early beginning way back in late sixties, India's growth in nuclear power generation has been rather poor compared to a number of other countries, who inspite of starting late, have surpassed India. South Korea and Taiwan for example, began generating nuclear power in 1977 but are producing nuclear power more then five times than that of India now. Similarly, Belgium and Finland have also overtaken India in this field.

In the coming years, the role of nuclear energy is going to be more and more important. A rather conservative Institute of fuel in Brisbane had estimated in mid seventies,...."by 2000 AD, 30 per cent energy needs will be met with solar energy, another 30 per cent by atomic energy and the rest 40 per cent by commercial methods...."

Pros and cons of nuclear power:

Experts differ widely on the need for nuclear energy. Some oppose it vehemently and would like to give it up completely because of inherent hazards. Others regard it as only an interim solution while still others feel that with highest safety standards this source is going to be an important supplier of energy needs by the turn of the century.

After the chernobyl disaster, there was a set-back to nuclear power programme all over the world. After careful surveys, Indian scientists, however, said that Cherniobyle type of disasterris not possible in India.

Under proper safety precautions, nuclear power is cheap, non-polluting and endless. The 'fossil fuels' are finite and their end is approaching fast. The solar energy has not been effectively tapped to be commercially viable. Thus the only solution that remains is to develop nuclear energy.

In India particularly, nuclear energy seems to be costly. This is because of the small size of the nuclear plants. In developed nations, the nuclear plants are of

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Action Plan for foodgrains production

Highlights of framework

Dr. S.S. Khanna & M.V. Pavate

In view of the finding of the mid-term appraisal of Seventh Plan regarding foodgrains production a meeting of Planning Commission was recently held presided over by the Prime Minister. At the meeting, it was decided to constitute a Task Force headed by Member, Argiculture, Planning Commission for formulating a strategy to achieve the foodgrains production level of at least 175 million tonnes by 1989-90. Accordingly the Framework Action Plan was proposed. The authors here present the highlights of the Plan.

SEVENTH PLAN DOCUMENT STIPULATED growth rate around 4% per annum for foodgrains during the Plan period to reach the level of 178-183 million by the year 1989-90. The mid-term appraisal of the Plan in respect of aricultural sector clearly brought out that production performance in the three years of the Plan has fallen short of target mainly because of unfavourable weather conditions. In 1987 failure of the south-west monsoon has resulted in exceptionally severe drought spread over 269 districts in 15 states and 6 U.Ts. covering an area of 44 million ha. Thus, the foodgrain production in 1985-86, 1986-87 and 1987-88 could not increase the peak production achieved in 1983-84. Besides, the appraisal also brought out the main areas needing attention to retain momentum of agricultural growth and to mitigate vulnerability to climatic factors. These include: (a) rise in the growth rate of productivity by raising inputs; (b) modernisation of irrigation system and improved water management to reduce the gap between irrigation potential and utilisation; and (c) acceleration and resilience of growth in rainfed/ dryland agriculture and in crops like paddy, oilseeds and pulses.

It is in this background that to achieve the stipulated growth rate in respect of foodgrains and to attain the target of the Seventh Plan for foodgrains a meeting of the Planning Commission was taken by the Prime Minister and Chairman, Planning Commission, Shri Rajiv Gandhi and it was decided to constitute a Task Force headed by Dr. Y.K.Alagh, member, Agriculture, Planning Commission for formulating a strategy so as to achieve a foodgrains production level of at least 175 million tonnes by the terminal year of the Seventh Plan 1989-90.

Framework Action Plan

Accordingly, immediately following the constitution of the Task Force, Member (Agriculture) held a series of meetings with concerned Ministries/Departments and Central Agencies, such as the Department of Agriculture &Cooperation, ICAR, Ministry of Water Resources, Department of Rural Development, NABARD as well as Divisions of the Planning Commission. The Task Force decided to adopt the methodology of Framework Planning. Given the need to put into operation the Action Plan for achieving the stipulated foodgrains production target from the very next season i.e. kharif 1988, it was decided to use all available information to prepare immediately a preliminary Framework Action Plan as a guideline for decisions that have to be taken forthwith and to identify further planning steps, required to be initiated simultaneously in order to provide the base for decisions on investments and policies required during the next two years. On the basis of available data, a disaggregated analysis was undertaken at the district/ zonal level for a tentative identification of areas having untapped potential for increased agricultural production and the specific constraints thereto. From such identified areas, a tentative set of districts was selected on the criterion that the specific constraints to agricultural production found therein could be removed within a period of two years. Tentative Action Plans for these districts were also drawn up.

Focus crops

In view of the need to make intensive efforts towards realisation of the stipulated production target, it was felt that the action should be concentrated in respect of a few most important foodgrain crops. Accordingly, wheat, rice, maize, bazra, gram and arhar (tur) were taken into consideration. However, as in the case of selection of districts, the selection of crops for inclusion in the Framework Action Plan was also required to satisfy the condition of having an existing potential for quick realisation of higher productivity. In other words, these crops were to be selected in which actual yield achieved in some of the better areas was far higher than the aggregate average. Thus, for instance, although the wheat yield achieved in Ludhiana district was 37.8 quintals/ha. (triennium ending 1985-86), the state

corresponding average for Punjab was only 32.8 quintals/ha. On this criterion, it was felt that jowar and bajra may be excluded from the Framework Action Plan since no significant gain in yield of these crops could be expected during the next two years in most of the states.

Thrust districts

For identifying the thrust districts to be included under the Framework Action Plan, the following features were taken into consideration:-

(a) Soil type
(b) Major constraints to higher production (e.g. inadequate irrigation, poor drainage, weed/pest problems, micro-nutrient deficiency)
(c) Past performance/growth and present level of achievement in the agriculture sector, particularly of foodgrains crops
(d) Existing level of irrigation and assured increase by 1989-90
(e) Technological package available including proven recommended varieties of the focus crops
(f) Coverage under existing thrust programmes viz. National Watershed Development Programme, Special Rice Production Programme, National Oilseeds Development Programme

On the basis of the above features a total of 169 districts in 14 States were tentatively identified as having an immediately realisable potential for higher foodgrains production and thus for inclusion in the Framework Action Plan. Of these districts, 108 were selected for rice, 68 for wheat, 27 for maize, 28 for gram and 20 for arhar. These are given in the following table:

Table 1

Foodgrains Production Thrust Programme
List of Selected Districts

Sl.	Name of the State	No. of selected districts	Rice	Wheat	Maize	Gram	Arhar
1.	Andhra Pradesh	8	8	—	—	—	—
2.	Assam	3	3	—	—	—	—
3.	Bihar	18	13	11	5	6	—
4.	Gujarat	7	4	5	2	—	4
5.	Haryana	7	5	5	—	2	—
6.	Karnataka	9	8	—	—	—	1
7.	Madhya Pradesh	30	12	12	5	7	4
8.	Maharashtra	12	7	—	—	—	5
9.	Orissa	5	5	—	—	—	—
10.	Punjab	3	3	3	—	—	—
11.	Rajasthan	14	—	9	6	8	—
12.	Tamil Nadu	8	8	—	—	—	—
13.	Uttar Pradesh	38	25	23	9	5	6
14.	West Bengal	7	7	—	—	—	—
	Total	169	108	68	27	28	20

The tentative list of districts alongwith all the data/information considered for their selection was sent to the concerned States for their comments. At a subsequent meeting with the 14 State Governments convened in Delhi on 7th February, 1988, the approach and strategy of the Framework Action Plan as also the list of selected districts were discussed.

Strategy

The Framework Action Plan prepared by the Task Force provides a strategy framework to the State Governments for working out detailed Action Plans for achieving the targeted higher foodgrains production in the selected districts. The strategy framework indicates the types of constraints and source of growth (e.g. irrigation, higher yielding varieties, fertilizer, plant protection etc.) which are to be taken into consideration for estimating the foodgrains growth potential. The strategy also includes identification of measures required to remove the constraints based on area specific approach and the financial resources required for the same. Furthermore, the emphasis was on better management of existing resources and commitment of additional financial resources of a critical nature wherever required.

Policy measures

Apart from the guidelines for preparation of detailed district level Action Plans by the concerned State Governments, the Framework Action Plan also lays down the broad estimates at the all-India level of the concrete steps and, where relevant, the concomitant policy measures that have to be taken. These are as under:

Ground-water

Sinking of 6 lakh shallow tubewells and 1 lakh dug-wells annually in the States/ districts having known reserves of unexploited ground water potential is to be ensured. The districts to be benefited are in the plain/ delta regions of Uttar Pradesh, Bihar, Orissa, West Bengal, Assam and Andhra Pradesh. Later, the states of M.P. and Maharashtra were also added. An additional benefit which will be derived in areas served by a number of traditional irrigation commands where drainage problems have arisen on account of uncontrolled surface irrigation, is the resultant decongestion through vertical drainage provided by the tubewells. The State Electricity Boards and the Rural Electrification Corporation are to ensure energisation of pumpsets to be installed on these wells. The funding of this activity is to be tied up with the provisions available under the Small and Marginal Farmers Scheme of the Department of Agriculture and Cooperation and IRDP/NREP/RLEGP schemes of the department of Rural Development.

Surface irrigation

The State Governments and the Central Ministry of Water Resources will identify specific projects which will ensure delivery of water upto the field level not later than in Rabi 1988-89. Such projects will be closely monitored within the ambit of the Framework Action Plan so as to ensure their completion within the target date. The State Governments will be committed for implementation of operational water Plan for each project in terms of a guaranteed number of watering at the field level by crop seasons.

Additional irrigation will also be achieved through an increase in the efficiency level of water delivery system of existing reservoirs and command areas where this can be achieved with marginal investments on such items as repairs of distribution canals, repair/improvement of water regulation systems and construction of field channels.

Seeds

The important prerequisite of provision of adequate seed is to be ensured. Planning for seed distribution is to pay special attention to the requirement of new seed varieties which need to be promoted in the selected districts. To ensure timely availability, an aggregate buffer stock of 10,000 tonnes each of wheat and rice seed is to be placed in specific agronomic areas of the country. The required credit support to the National Seeds Corporation and State Seed Corporations will need to be provided by the banking system. Necessary policy decisions would be considered by the Ministry of Finance in case the present financial condition of the Corporations raises any problem in this regard.

In order to ensure the desired level of off-take of seeds by farmers it may be necessary to reduce the price of wheat and paddy seeds to their efficiency cost levels, till such levels have been worked out by the Ministry of Finance/ Ramamurthy Committee. Where the cost of production of Government seed producing agencies is higher, we feel that the excess may have to be subsidised either through over-subsidies or under writing of losses of the seed producing agencies. The production of breeder seed by the Agriculture Universities and ICAR Institutes required under the thrust programme, will be achieved by providing assistance in the form of a revolving fund. Besides, each State has been asked to develop a seed strategy as per the requirement at different stages—nucleus, breeder, foundation, certified and truthfully labelled seeds. In this context the Seed Certification Agencies have been asked to take necessary action in time.

Fertilizers

Since foodgrains production, in particular, is highly responsive to fertilizer use, the requisite level of fertilizer off-take will have to be ensured for achieving the stipulated production target. The distribution of fertilizers in small packs will go a long way in raising the off-take, especially in areas with a large percentage of small farms. The encouraging results achieved in Uttar Pradesh and Orissa are a pointer to this. Based on the recommendations of the Task Force, the Government of India has asked the Fertilizer Companies in both public and private sectors to give a discount of 7.5% over notified prices for coming kharif and rabi seasons. The Companies have been asked to absorb the cost of this discount through better inventory management.

Improvement of the fertilizer delivery network to make available timely supply within a reasonable distance of the farmer is also to be ensured. An operation Plan for the fertilizer companies to make fertilizer available in areas below the level of *taluk* headquarters will be prepared. Any resultant additional distribution cost is to be matched against the additional cost of keeping fertilizer by the companies and the excess, if any, provided for in the fertilizer subsidy or through appropriate fertilizer pricing policy decisions.

Plant protection

Use of pesticides and weedicides is necessary for improving fertilizer use efficiency and thus achieving higher yields in wheat and pulses. The identified constraints and recommended technological package for a number of districts/zones required the application of appropriate weedicides, fungicides and insecticides. The Task Force has to a large extent recommended pricing strategies to meet the objectives of cheaper inputs to farmers, rather than direct subsidies. Because in inputs like pesticides and seeds, subsidies can become a method of supporting inefficient production units (high cost technical grade manufacturers or formulators) or high cost distributors in cooperative, State or private sectors, and the benefit may not go to the farmers. With a price rationalisation scheme the farmer gets the benefit straightaway. In this context on the basis of recommendation of the Task Force the Government of India has indicated full exemption from excise duty for a large number of pesticides intermediates and has recommended reduction of customs duties in respect of a number of pesticides and pesticides intermediates.

Market support

In many of the districts available evidence suggests that in the areas which are 10 to 15 kms. away from the main roads, the farmer does not get the procurement price and produce is collected by small traders at lower prices who then sell it to the procurement agencies. In order to avoid this, the Framework Action Plan has recommended that there must be procurement centres within 5 kms. of each village as in Punjab.

Credit

The Framework Action Plan has laid emphasis on the availability of adequate credit to the farmers in the thrust districts for purchasing seeds, fertilizers and pesticides/weedicides. Since the bulk of the crop loans are given by the cooperative banks/societies, it is imperative to ensure that the credit channels do not get choked in the selected districts. In this connection the NABARD has estimated the non overduecover requirements in respect of 14 States as Rs. 37.30 crore which would ensure smooth flow of short-term credit delivery in these districts.

Crop-wise credit requirements have been worked out by NABARD on the assumption of 10% increase in the area under production and production outlay has been worked out with reference to per hectare scale of finance for different crops selected under the programme. The total credit requirements tentatively worked out to be Rs.3734 crore in the selected districts under the programme. Commercial banks and Regional Rural Banks will also be involved in financing this programme.

(Contd. on page 28)

Boosting foodgrains production

Manoj Pandey

India's foodgrain production has increased manifold since independence, with increase in area playing a major role in the initial stages and productivity taking the lead role later. The growth was frequently punctuated by droughts and suffered from regional imbalances and inter-crop disparities. Recent corrective and invigorative steps, says the author, would make the foodgrain production more stable and balanced. However, he suggests, we would have to develop the hitherto neglected areas, in a time-bound manner for sustained progress in foodgrain production.

TODAY, WHEN WE ARE TALKING ABOUT India's agriculture, the atmosphere around is one of confidence and not of uncertainty that was there this time one year ago. Confidence, because the rains have so far been copious and wide-spread, and more so because we have been able to harvest an excellent rabi crop just after the long dry spell.

The drought of 1987, the severest in the century, was a nightmarish experience for the country, especially for her agriculture which is heavily dependent on rains. However, in long run, this drought may prove to be a blessing in disguise as far as foodgrain production is concerned, in more ways than one.

One, because the drought made it clear that foodgrain production—in fact agriculture as a whole— in Indian conditions brooks no complacency: record or near-record foodgrain production for some successive years can be no guarantee against a nosedive in a drought year.

The drought brought the Centre and the States together as never before for formulation and implementation of foodgrain production strategies. It also led to refixing of priorities within the economy and within agriculture itself.

SFPP

One offshoot of the concern by last year's drought was formulation of a Special Foodgrain Production Programme which is expected to take the foodgrain production to 16.6 crore tonne level this year and 17.5 crore tonne in 1989-90. This programme is being implemented in the districts having potential for quick rise in foodgrain production because of a strong infrastructure and resource base. The focus of the programme is on five crops, viz. rice, wheat, maize, gram and arhar, which can give productivity jumps under suitable conditions. The strategy is based on increased use of fertilizers, control of pests, diseases and weeds, harnessing of water resources and proper supply of improved seeds and credit.

But for the drought years—which unfortunately have been a bit too many—the foodgrain production in India has shown a significant upward trend in recent years. In the period from 1980-81 to 1985-86 (after which the country has been reeling under successive droughts), foodgrain production rose by 3.4 per cent per year. More important is the fact that the growth was mainly due to scientific management of inputs and strengthening of infrastructure. Unlike earlier years, contribution of increase in cropped area was almost nil.

In retrospect

To see how we have been able to increase foodgrain production at an impressive rate in the last few decades we shall have to go back to the preindependence days.

Upto the middle of the present century when planning started in India, extension in canal irrigation was the major input in agriculture and foodgrain production remained stagnant with an insignificant growth of around 0.3 per cent per year.

In the next fifteen years, from 1950-51 to 1964-65, more area was brought under irrigation and wastelands were reclaimed. These factors, together with increase in productivity led to foodgrain production growth of 2.9 per cent per year. The increase in productivity in this period came through improved cropping practices, new crop varieties and increase in the use of chemical fertilisers.

Advent of short wheat and rice varieties through imported germplasm in mid-sixties ushered in Green Revolution in India. In the following 14-15 years, the production rose at a comparatively slow pace of 2.4 per cent a year because of lower contribution from increase in cropping area, while rise in productivity through better seeds played an important role. Finally, in eighties, as said earlier, better management of inputs and a strong infrastructure resulted in faster growth in foodgrain production.

A solid ground

These years have seen great expansion in all the fields of agriculture which together have created a solid base for launching more and more ambitious food production strategies. Irrigation, for example. Today about thirty per cent of the net sown area of the country is irrigated as compared to around 17 per cent in 1950. This contributed greatly to the success of intensive area programmes and the green revolution in 60's. The present Special Foodgrain Production Programme also draws on irrigation resources a great deal. It is hoped that irrigation would cover about forty per cent of the cropped lands by the turn of the century giving further boost to foodgrain production and making it more stable.

Fertilizer consumption in these four decades has risen stupendously from 69,000 tonnes in 1950-51 to over ninety lakh tonnes in 1987-88, Use of certified seeds, starting with a modest base in mid-sixties has reached 56 3 lakh quintals in 1987-88. Pesticide use has also risen fast in this duration. With mass application of these inputs, a stocking-supply-distribution network has grown throughout the country. It is being further strengthened under the Special Foodgrain Production Programme and other ongoing schemes. Another important input, credit, has also increased manifold. It would be worth a mention that credit to agriculture and allied activities through banks and cooperatives, which was Rs.24 crore in 1950-51, has grown to Rs. 7600 crore now.

In the meantime, great expansion of farm mechanisation took place and power consumption by the agricultural sector went up. Various rural development activities were also undertaken which directly or indirectly contributed to increase in foodgrain production and productivity.

The support from farm technology has also become a major ingredient of the present foodgrain production strategy. The countrywide network of research institutions and agricultural universities has been responsible for development of technologies suitable to Indian conditions and their acceptance by the farmers. The performance of Rabi last year is, in fact, the success story of our technological capabilities.

As regards foodgrain production in drought-years, it may be seen that the droughts in eighties have had less deleterious effect on foodgrain production than in the earlier decades. While the shortfall in foodgrain production during the drought of 1965-66 was 19 per cent, during 1972-73 eight per cent and during 1979-80, 17 per cent, it was only about four per cent during 1987-88 although it was the worst drought of the century. This is not to suggest that the foodgrain production is no longer sensitive to the vagaries of monsoon but that over the year it has acquired cushion to withstand the blows of drought.

Thrust areas

The growth of foodgrain production since independence, though impressive, has not been without defects and anomalies. Only some progressive regions and only some crops have benefited from green revolution and later developments. Neither have the small farmers developed as fast as the big land-owners, or the drylands as much as the irrigated lands. The Seventh Plan took notice of these major aberrations and identified thrust areas for immediate, special attention.

It was found that the yield of rice in the eastern region of the country, where it is grown most extensively, was not increassing as fast as in other areas of the country, Therefore Special Rice Production Programme for Eastern States was launched to improve yield through technology support.

Similarly, for pulses, whose production had stagnated at 110-130 lakh tonne level and yield had also not improved much over the years, a National Pulses Development Project was taken up.

It was realised that for development of drylands, an integrated plan was needed for overall rise in agricultural production simultaneously with conservation of soil and moisture, and land upgradation. Past experience had shown that such plan would be most effective if whole watershed was taken as unit of management. Thus came the National Watershed Development Programme for Rainfed Agriculture. A project to reclaim alkali soils, the ones which because of high sodic-salt concentration cannot sustain vegetation, has also been started in Haryana, Punjab and Uttar Pradesh.

For assistance to small and marginal farmers for increasing agricultural production, a scheme is in operation since 1983-84. Under this, small and marginal farmers are being helped with minor irrigation facilities and seed minikits. Besides, attempt is being made to improve the quality of the land belonging to these farmers.

This year's budget has also given a number of benefits and concessions to the farming sector, further helping the farmers and strengthening the foodgrain production programmes.

Future action plan

Still a lot needs to be done. There are challenges to be met. There is potential to do so, and there are equally imposing constraints to our progress, limited resources, contradicting and competing priorities, and a socio-political system which does not allow reforms to

succeed smoothly. These obstacles are going to increase with the burgeoning population.

One area that needs to be given prompt attention is reclamation of cultivable wastelands for foodgrain production. Even if these vast patches, some 180 lakh hectares, are upgraded just enough to produce fuelwood and fodder, they will reduce the burden on the ordinary farmer who spends a lot of energy in collecting fuelwood and fodder and thus cannot concentrate on foodgrain production. Though a National Wastelands Development Board has been set up for this purpose, the progress of reclamation seems to be very slow.

We also need to give more thrust to rainfed farming. Unirrigated lands, which constitute more than two-thirds of the cropped area of the country, produce only about 42 per cent of total foodgrains. More than 91 per cent of the coarse grains and pulses are grown in rainfed areas. There, thus, lies a great potential which is to be harnessed for a sustained rise in foodgrain production. For this, rain-water, whenever available, will have to be conserved and made best use of. Hardy crops will have to be popularised and suitable technological packages will have to be developed and disseminated fast. The recent thrust in this area requires further momentum and time-bound approach.

Any further expansion in irrigation should be through minor irrigation only. It is more cost effective to the country and more rewarding to the common farmer, as compared to medium and major irrigation. Canal irrigation should be restricted to riverine areas and the areas not fit for other modes of irrigation. Major irrigation works can perhaps wait until all the groundwater resources are optimally utilized.

A shift also needs to be made in crop preferences. Over the years, wheat and rice have grown in importance at the cost of coarse cereals and pulses whose area and share in total grains production has been going down. Only if we are able to ensure markets and remunerative prices for these crops these will be popular with the farmers. One way to do so is to set up food processing industries for producing high-value food items from minor grains. Coarse cereals and pulses are hardy and can give good yields in rainfed areas, given, as said earlier, proper technological support.

In fact, our future strategies for foodgrain production will have to be so elaborate as to have specific 'crop-technology-marketing' system for every agro-climatic zone, command area, watershed, village, and stretch of fields. A similar exercise was indeed done while formulating the current Special Foodgrain Production Programme, on a limited scale, for a few crops and for selected districts. A much more expansive and integrated plan will have to be evolved for whole country incorporating major details like country's needs, village industrialisation and forestry, and taking care of local specifics like soil condition, water potential, economic parameters.

Concentration on major crops and privileged areas have proved effective in the past; through this approach we may be able to raise foodgrain production fast in futrure also. But, for sustained and all-round progress we shall have to manage the whole agricultural land of the country as a single unit.

Small farmers will continue to require special care becuase of their sheer number, vulnerability, poor resources, and most significantly their persevering efforts to get maximum production from the small marginal lands.

Small farmers, minor crops and minor irrigation— they all have their strengths not sufficiently revealed so far. They need to be armed with a programme reaching the smallest unit of land. Let 'small' be the watchword for our future foodgrain— nay, agricultural—strategy. Small is beautiful, and highly productive too. ☐☐☐

(Contd. from page 25)

Output targets expected

The target for additional production plan under the Framework Action Plan is as follows:-

		(million tonnes)
1.	Additional production from 3 million hectares of additional irrigation area (2.2 million hectares from shallow tubewell programme and balance from surface water programme).	3.0
2.	Fertilizer and improved input and management response.	5.0
	Total	8.0

The trend level of production of foodgrains for 1989-90, based on the pace of agricultural development already achieved, would be at the level of 165-167 million tonnes. Therefore, the foodgrains target for 1989-90, taking into consideration the expected increase in production, will be as follows:-

		1989-90 (million tonnes)
1.	Production level without Framework Action Plan.	165-167
2.	Additional production from Framework	8
	Total	173-175

The Framework Action Plan has recommended an inbuilt mechanism for monitoring and evaluation of the plan/progress at various levels like Panchayat Samiti or Mandal levels, district levels, at the State levels and at the level of Government of India.

The Framework Action Plan was discussed at length with the State officials and the targets for 1988-89, crop-wise and State-wise have been fixed. The total foodgrains production has been targeted at 166.57 million tonnes for 1988-89. The crop-wise targets of each State are presented in table 2. (See Table at page No. 34) All the States have geared up their administrative machinery to achieve the targets assigned to them. If the indications given about the current monsoon come true, there should not be any difficulty in achieving this target for the year 1988-89. ☐☐☐

Industrial Policy can help promote export

Nirmal Ganguly

In this article the author makes a compassionate plea for promoting our export production. Analysing the role of industrial policy in export promotion, the author vehemently pleads for identification of thrust products and areas and improvement in the quality of export products so that our goods are made internationally competitive in terms of technology, quality and cost. Citing the examples of South Korea and Taiwan the author affirms that export promotion will stimulate the overall industrial and economic development of the country and also help maintain the balance of payment position steady.

INDUSTRIAL POLICY HAS AN IMPORTANT bearing on export promotion. While exports provide the foreign exchange required for promoting industrial development, industrial development stimulates export promotion. The Industrial Policy Resolution of 1948 itself emphasised accelerated production of commodities the export of which will increase earnings of foreign exchange. The Industrial Policy Resolution 1956 also stressed the need to accelerate the rate of economic growth and also to speed up the pace of industrialisation. It was, however, left for the guidelines for licensing of items of July 1970 to set out the role of Industrial Policy in export promotion.

The guidelines

Ir was recognized as part of industrial policy that industrial capacity would have to be consciously and specifically built up in order to encourage production for exports, particularly, in respect of those items, where India had a comparative advantage and where favourable trends were emerging in the international markets. In considering and dealing with applications for industrial licences, regard was to be paid to the creation of capacities in such a manner that exports supplies were generated. Export potential of undertakings belonging to the medium and small scale entrepreneurs was to be developed to the maximum possible extent. Special attention was to be paid to the development of export production of small scale sectors units in respect of items specifically reserved for them. Undertakings belonging to or controlled by the large industrial houses and foreign concerns, which were expected, according to the new Licensing Policy, to participate mainly in the core and heavy investment sectors, were enabled to estabish undertakings or expand production other than in those sectors provided they undertook specific export commitments. The minimum export obligation in such cases was 60% or more of the new or additional production which was to be achieved within a period of three years.

The guidelines also specified that in the interests of stepping up exports, units other than small scale units could be considered for expansion or creation of new capacities in respect of items reserved for the small scale sector, if they undertook an export obligation of a minimum of 75% of the new or additional production, to be achieved within a minimum period of three years. It was categorically decided that in respect of export-oriented units, applications for industrial licences and other clearances could be accorded the highest priority by the Government and administrative machinery was to be enforced uniformly and strictly and export obligation imposed on industrial units and accepted by them.

Foreign investments

In 1973, foreign concerns and subsidiaries and branches of foreign companies were made eligible to participate in the industries specified in Appendix-1, while continuing to be entitled to invest in industries where production was predominantly for exports. Their investments were to be examined with special reference to technological aspects, export possibilities and the overall effect on the balance of payments.

The policy statement

The Industrial Policy Statement of July 23, 1980 which is based on the Industrial Policy Resolution of 1956, specifically declares "faster promotion of export-oriented industries" as a socio-economic objective. It also emphasises that industry must contribute its share in creating a more favourable balance of trade by

catering to the ever increasing foreign markets and clarifies that Government would sympathetically consider requests for setting up 100 per cent export-oriented units as also requests for expansion of existing units exclusively for purposes of export and for allowing higher production for exploiting fully the emerging export opportunities. Realising that Indian industry has not been able to compete in markets abroad because of the scale of output which is related to the level of domestic demand, is too small to give them the advantages of modern technology and economics of scale and that a larger production base would increase the competitiveness of Indian industry abroad, the Policy Statement declares that Government would consider favourably the induction of advanced technology and would promote creation of capacity large enough to make it competitive in world market, provided substantial exports are likely. Again, for achieving greater exports, the Statement emphasises the need for earmarking substantial resources for R&D to constantly up-date technologies. Moreover, as per the Policy Statement, companies which have well-established R&D Organisation and have demonstrated their ability to absorb, adapt and disseminate modern technology would be permitted import of such technology as will increase their efficiency and cost effectiveness.

Specific provisions

Following are some of the recent specific provisions in the Industrial Policy designed to promote exports:

a) MRTP/FERA compaines which are normally not allowed to produce non-appendix I items, are allowed to do so subject to an export obligation of 60 per cent of its production if the item is not reserved for small scale and 75 per cent of its production if the item is so reserved. However, in Category 'B' and 'C' backward districts, the export obligation is of the order of 25 per cent.

b) For MRTP companies, production for exports is excluded for determining dominance.

c) Production of new article is allowed for exports where there is variation in the article, an industrial unit is licensed to manufacture.

d) Section 22 of the MRTP Act speciafically provides for exemption from provisions of Section 21 (for expansion) and Section 22 (for establishing new undertaking) if the production is for exports.

e) A special scheme for setting up 100 per cent export-oriented units has been introduced, with facilities for duty-free exemption for import of capital goods/raw-materials/components without clearance from indigenous angle, and any insistance on dilution of foreign equity etc. Finished goods are exempted from central excise. A Special Board has been constituted to give a single point clearance of the proposals under the scheme. Clearance is given within 30 days from the receipt of the application.

f) Restricitions imposed on new industrial undertakings in metropolitan cities are selectively relaxed in case of units which produce for exports.

g) Licensed industrial undertakings are exempted from obtaining substantial expansion licences if the entire production in excess of licensed capacity is meant for exports.

h) The list of Appendix-I items wherein the MRTP and FERA companies are allowed to participate, has been extended. It now covers as many as 31 important industry groups. This list contains some core industries of importance to national economy and also the industries having direct linkages with such core industries and industries with long-term export potential.

i) In selected areas industrial licensing policy has been liberalised with a view to making industry competitive internationally in regard to scales of production and technology. The policy of broad banding has been extended to a large number of items particularly in identified thrust areas so as to provide production units with requisite flexibility to adjust their production to prevailing international demand.

Favouring export promotion

There is thinking in some quarters that Industrial Licensing Policy sometimes stands in the way of export promotion But in view of wide ranging industrial policy initiatives taken during the last about three years, such a criticism does not appear to be well founded Delicensing of as many as 28 major industry groups, broad banding of 31 industries, allowing minimum economic scales of production in respect of 72 industries, enlarging the list of Appendix I industries, exempting 79 industries under Section 22 A of the MRTP Act, allowing private sector participation in the manufacture of tele-communication equipments and reintroduction of scheme of re-endorsement of capacity in a more attractive form are all pointers to the fact that there is hardly any constraint on the part of the industry if they follow a growth-oriented approach On the contrary, the new policy has thrown a challenge to the industrial sector to come up to the expectations generated by the announcement of far-reaching industrial policy package

Constraints on export promotion

Perhaps the constraints on export promotion lie on our being a high cost economy, quality of our goods not being turned to the continually changing consumer preferences and our failure to meticulously adhere to the time schedules for execution of export orders. We are high cost economy not because industrial policy stands in the way of licensing units of optimum size. In fact, optimum size is one of the essential ingredients of our industrial policy. Our costs are high because the licensed capacity is not actually installed, and installed capacity does not always result in actual production. High cost economy also arises because of prohibitive tariff barriers imposed on import of capital goods, raw material, components and other critical inputs. Technological obsolescence and lack of modernisation and R&D efforts too increase costs. Our costs also go up because of multi-point excise duties. Our resource constraints regulating production to demand projection

give birth to monopolies, oligopolies and other forms of market distortions, enabling industry to make undue profits. As a result, although our labour costs are substantially lower than those of developed economies, our overall cost of production is much higher than theirs.

As regards quality requirements, Industries (Development & Regulation) Act in Section 15, 16 and 18A specifically provides for it. It is mainly incumbent upon Export Promotion Councils and other such bodies to ensure that goods exported are of the requisite quality and in any case exporters do adhere to the specifications and samples forming part of the contract.

Timely supply of goods can be partly ensured by linking benefits for effecting exports to timely supply.

Export promotion in global perspective

Classical economists like Adam Smith and David Ricardo visualised a world uninhibited by any form of distortion and with free market forces at work. In such an economy there was to be free movement of goods as well as capital ensuring relative cost advantage, promoting specialisation through division of labour, thus maximising the gains from trade.

Such a situation, however, does not exist in today's world. The world economy of the present day is beset with harsh protectionist measures and other restrictive trade practices, shrinking concessional finance as also continuation of pernicious effects of recessionary trends.

In view of the contemporary world trade scenario wherein the developed countries dominate the terms through harsh protectionist measures the imperative for increasing South-South cooperation for export promotion in respect of developing countries can hardly be over-emphasised.

Export-led growth

International Trade opens up market for a country's specialised products, particularly, industrial products. It increases employment, raises profits, promotes savings and investment, stimulates economies of scale and innovation, and secures imports of capital goods so essential to growth. Trade, thus, acts as an Engine of Growth as suggested by Sir D.H.Robertson. Inspite of restrictive trade practices being resorted to by the developed world, the inexorable forces of competition do assert themselves in the sphere of international trade. Therefore, all that is needed is that the developing countries should make available goods at competitive prices and of reasonable quality. This approach namely, promotion of exports of the industrial products, rather than export of primary and semi-finished products, has come to be known as "Outward looking industrialisation". According to this approach, industrialisation can not be achieved through import substitution only. What is more important is the promotion of exports especially of industrial products. South Korea and Taiwan present striking examples of industrialisation through export of industrial prod Indian economy, which has achieved a large measu diversification in its industrial structure, might loo export markets for their industrial products in a way.

Another important reason for promoting expo industrial products in our economy emanates fron fact that due to lack of purchasing power, deman some products are not enough in the domestic ma Therefore, international markets can be exploited for acceleration of industrial growth. Similarly, country's burgeoning import bill and import of ca goods and other critical goods can be effectively fina by raising exports. The foreign exchange from ex market can also help in raising the rate of growt G.N.P. This will also promote the rate of saving investment in the country. Creation of effective ma for our industrial goods in the foreign countries will expose our products to international competition raise their quality standard. Thus, export promc will also stimulate the overall industrial and econ development of the country.

Thrust industr

The international trade scenario is becon increasingly difficult on account of balance of payn problems in a number of our traditional market developing countries and on account of protectio tendencies in the developed countries. Alongside, availability of financial resources from multilat financial institutions is also somewhat restricted. process of modernisation and technological upgrada of the industry is expected to increase the im requirements of the country and put a pressure on balance of payment position In this context, the de ing and stagnant trend in engineering export witne during the last few years needs to be arrested. Wi view to evolving the export strategy for the enginee sector, a Committee was set up under the Chairman of Shri D.V.Kapur to draw a perspective plan for ex of engineering and capital goods. The Committee felt that given our natural resources and skilled n power and the diversified industrial structure an exce base exists for achieving a quantum jump in enginee exports. The Committee has recommended a pronged strategy in this regard:-

(i) Continuation and strengthening of the exis broad system of incentives for export w would include provision of raw materia international prices and compensation for advantages arising out of domestic taxatio neutralise cascading effect of such taxes.

(ii) A major breakthrough would be possible o the basic structure of our domestic indust made internationally competitive in term technology, quality and cost. For this purp the Committee has recommended a sele approach and suggesyed selection of s 'thrust' industries where the existing indus structure is sufficiently developed and in w the country has a potential comparative advan

Based on the recommendations of the Committee, a list of 35 'thrust' industries has been identified. These include commercial vehicles, two and three wheelers, Agricultural Tractors, Machine Tools, Chemical and Process Plants, Textile Machinery, Sugar Machinery, Mining Machinery, Refrigeration equipment, D.G. Sets, Diesel Locomotives, Railway wagons, Solar/Renewable energy equipment, Electronics and Computer software, etc. The Committee has further recommended that these selected industries should be offered a special policy environment keeping in view the considerations of optimum scales of production, technological upgradation, modernisation and competition with a view to making these industries internationally competitive.

Slow growth of engineering export

The main factors resulting in slow growth of engineering exports from India can be enunciated as follows:-

(a) Fierce competition in the international market in the wake of shrinking world market as many of new entrants are emerging as potential exporters for industrial goods.

(b) Harsh protectionist tendencies and counter-purchase policies pursued by some of the competing countries;

(c) Slowing down of the developmental activities in most of the developing countries in Asia and Africa;

(d) Liquidity crisis encountered by Middle East due to Iraq conflict;

(e) India's inability to match attractive credit terms being extended by our competitors for capital goods and projects to the developing countries mostly through mixed credits,

(f) Technological and quality constraints being faced by India;

(g) Because of India's protected markets all these years, domestic profitability in some segments of industry is higher vis-a-vis export profitability. This coupled with the higher risk involved in the export market has resulted in th slow growth of our engineering exports.

(h) High domestic cost of production on account of high cost of raw material, finance capital, equipment (including imported ones), high cost of power and sub-optimal level of performance of infrastructure industries, has also contributed to slow growth of our exports.

(i) Some of the large industrial houses are also not making adequate contribution to export of engineering goods;

(j) Sometimes it is experienced that in India, the industrial sector makes an effort to export surplus of what they manufacture rather than to produce goods which are required in the World Market.

Role of small scale sector

The performance of the small scale industrial sector especially with regard to exports has recently come in for commendation by the Prime Minister. Exports from the sector have inreased from Rs. 532 crores in 1975-76 to Rs. 2580 crores in 1984-85. The share of the small scale sector in total exports has correspondingly increased from 13% to 22.5%. It is pertinent to note that out of total exports from small sector, 91.2% consists of non-traditional exports. In fact the share of small scale sector in total exports would be more if its contribution in the form of indirect exports is to be taken into account as the small units supply a large volume of parts and components that go into the assembly of finished products by the medium and large scale sectors. During 1984-85, exports of sports goods, processed tobacco, snuff, lac and many items of plastics originated exclusively from the small scale sector. In addition. this sector accounts for 92% of exports of marine products, 90% of readymade garments, 84% of woollen goods, 61% of leather and leather products and 30% of engineering goods.

The sector has vast potential which is yet to be exploited. To meet the country's growing foreign exchange requirements, it is imperative that all out efforts are made to further accelerate exports from this sector.

Conclusion

In the ultimate analysis, export promotion is a factor not only of industrial policy but of several other ingredients. Identification of new markets and new products, easy availability of export credit, production of quality goods and timely supply are equally necessary. Thus, thrust products and areas will have to be identified. Industrial policy in conjunction with congenial framework of monetary, fiscal, trade and forward looking technological policy can go a long way in bringing about mass production of thrust items in the industrial sector which in turn is bound to give a new boost to the pace of export promotion. □□□

(Contd. from page 22)

1000 MW or more capacity. In large size plants, the fuel cost in overall generating costs becomes very low-only about 25 per cent compared to higher fuel costs in other type of plants, e.g. it is over 35 per cent in oil-fired power stations. As the running costs come down, the power produced becomes cheaper.

Nuclear plants, besides giving power, are also useful in a number of other fields. They provide radio-isotopes for use in medicine. They also are useful in genetics in providing high yielding varieties.

Thus it can be said that under the present circumstances, nuclear energy cannot be dispensed with. India will have to develop these resources to the fullest possible extent. □□□

(Contd. from page 7)

1988. Similarly, photovoltaic power is being provided to 127 water pumping systems, 67 community lighting/TV systems, 312 domestic lighting units and 265 battery charging units. Small power plants with the aggregated capacity of 47 KWp have been set up during the first nine months of 1987-88. Photovoltaic powered TV transmitters (VLPTs) have been set up in Andaman & Nicobar Islands and Lakshadweep. Further in order to help the National Literacy Mission it is proposed to supply solar photovoltaic power at 105 centres. Work is also in progress to set up centralised photovoltaic systems in the range of 20-25 KWp in Orissa and Haryana.

Wind energy

The country has a high potential of wind energy. It is estimated to be in excess of 20,000 MW for power generation. A recent study by the World Bank and US Department of Energy estimated that India ranks very high among 29 developing countries where wind has more promising role than elsewhere. The capacity of 5 wind farms in the country has been raised to 4.40 MW which generated and fed more than 90 lakh units of electricity to the respective State grids upto the end of February this year. Further expansion of the wind farms will establish 9.40 MW capacity by about middle of June

Investment & achievement

What is particularly noteworthy is that it has been assessed that against a total central investment of Rs 338 crore in the last four years on the renewable and non-conventional energy sector such as family size biogas plants, improved chulha, solar thermal, photovoltaic and wind energy, savings in fuel and organic manure are already of the colossal order of Rs. 340 crore equivalent per year. Further the programmes also generated employment of about 450 lakh mandays. The likely saving of energy from solar thermal systems would be of the order of 200 million KWH heat equivalent per year. In addition nine million units of electricity were fed to the respective State grids by the wind farms and 13 lakh units of electricity are estimated to be generated by the photovoltaic systems already in use. Besides 2200 villages have been provided street lights and 12,000 villages have been rendered smokeless. The Department of Non-Conventional Energy Sources has pertinently prepared a Perspective Plan for the development of non-conventional energy sources in the country upto the year 2001. The plan envisages generation/saving of energy from non-conventional and renewable energy sources to the extent of 250 million tonnes of coal replacement per annum by the year 2001 including 15,000 MW of electric power in gradually ascending order from now. The department is optimistic that given the funds and needed back-ups through well-conceived policy measures, these figures and more are quite feasible due to the development of technologies and infrastructure that have supervened and the small gestation periods to install non-conventional energy systems.

The concern

It needs to be mentioned that against the approved Sixth Plan outlay (1980-85) of Rs. 100 crore for non-conventional energy sources, the actual expenditure during that five-year period was Rs.161.7 crore. An outlay of Rs.412.35 crore was provided for the Seventh Plan period which speaks itself of the concern Government has in promoting and perpetuating the cult of renewable sources of energy, which is undoubtedly the need of the hour.

Need for new thinking

But as the Advisory Board on Energy rightly put out there is a need to think anew about our approach to renewable energy development. A meaningful and pointed indigenous research, development, design and engineering activity encompassing various facets of non-conventional energy must be put in place before long □□

(Contd. from page 10)

wastelands in different parts of the country. The technoeconomic studies have been taken up in technological options for power generation from biomass wastes and agro residues.

Urja gram

The Government has also taken up a 'Urja Gram' programme with the object of achieving self-sufficiency in villages through harnessing of locally available sources in an integrated manner. The 'Urja Gram' projects envisage development of a combination of systems which are locally available such as bio-energy, solar energy and wind energy, etc. Over 50 such projects have been completed and another 115 are under various stages of implementation.

There cannot be a single clear-cut model or unique combination for an integrated energy system in villages. These systems are site-specific and need to be developed taking into account needs, resources, skills, available technologies, social ethos and cultural diversity of a given location.

Emphasis & incentives

The utilisation of new and renewable sources is a potential mass movement. These integrated energy programmes can become the centre-piece of composite economic, social and cultural development at the village level.

Other programmes being taken up in the field of new and renewable sources of energy relate to micro hydel power, human and animal energy, magneto-hydro dynamics, hydrogen energy, ocean and geothermal energy, battery operated vehicles, energy from urban waste, and chemical sources of energy.

The Department of Non-Conventional Energy Sources has recently formulated a perspective plan for the development of non-conventional energy sources upto the year 2001 A.D. Based on this plan, it has

been estimated that with the increased exploitation of these sources, it would be possible to create energy equivalent to over 250 million tonnes of coal and 15000 MW of power generation annually by the year 2000.

A public sector enterprise, Indian Renewable Energy Development Agency, has also been set up to promote a wider industrial base for renewable energy technologies. It will provide loans to industries and users on soft terms. Various fiscal incentives including grant of subsidy to beneficiaries are being provided to motivate people to take up such projects.

Though the capital cost is high in the beginning, new and renewable energy sources provide clean and perennial energy with minimum recurring costs. Considered from the long-term view and the "full life-cycle cost, many of the alternative energy technologies look very attractive The development of non-conventional energy sources would also help ease the strain on the infrastructure as these systems will come up in the vicinity of consumption centres. To the extent these energy sources replace conventional energy, there will be a reduction in the investment requirements of the infrastructure sector also", says a FICCI study. □□

(Contd. from page 14)

diameter of about 100m. No more than 5-hectares should be needed under the machine for its exclusive use during erection, maintenance and safe operation. The next machine would probably be kept about 1 km apart in order to ensure adequate re-charge of winds if they happen to blow from the direction of one machine to another. It would be unnecessary to requisition this 1-km stretch which can be put to alternative uses such as agriculture, forestry and even for construction of dwellings. All this is possible since the tower height might well be over 100m for a large machine. In terms of land use, the approach of isolated large units amounts to 20 MW/km^2 which is four times better compared to what is possible with the windfarm approach. It is, of course, possible to deploy smaller machines also on isolated single unit basis but this might be somewhat less economical since an advantage arising from the economy of scale, which is common among electrical equipment, would not be available: □□□

TABLE-1

Weight distribution of four typical machines

Machine type	Rated Power (KW)	Rotor Diameter (metres)	Rotor Weight (tons)	Nacelle Weight (tons)	Tower Height (metres)	Tower Weight (tons)	Total Weight (tons)
Type I 3-bladed, fixed pitch, stiff tower	90	18 8	2.4[1]	4.6	24 4	4 3	11 3
Type-II 2-bladed, fixed pitch, soft tower	270	21.0	0 9	3 4	51 0	7 8	12 1
Type-III 3-bladed, movable pitch	250	25.0	2 0	6 0	25.0	9 0	17 0
Type-IV Darrieus, 2-bladed, vertical axis	120	17 0	2.3	—	25.0	4 1	8.2*

13.6 tons for a commercial version of the same size

TABLE-2

Figures of merit for some windmills

Machine Type	Rated Power (KW)	Rotor Diameter mtrs	Annual Output (million kWh)	kWh/m^2 Swept Area	kWh/kg of Rotor Weight 1	kWh/Kg of Nacelle Weight	kWh/Kg of Total Weight 2
Windfarm successfuls							
Type-I	90	18 8	0 13	470	54	28 3	11 5
Type-II	270	21 0	0 28	810	290	83 0	25 0
Type-III	250	25.0	0.33	670	160	56 6	22 9
Type-IV	120	17.0	0.14	490	60	—	16.73
Other Prototypes							
Smith-Putnam, USA (1941)	1,000	53.3	1.05	470	10	5.3	3 8
Allgaier-Hutter, FRG (1955)	100	34 0	0 36	390	130	50 3	30 5
MOD 2, USA (1980)	2,500	91 4	5 20	790	59	43 0	22 0

1 :Includes hub.
2 :Excludes rotor and hub.
3 :Based on prototype weight.

(Contd. from page 28)

TABLE-2

Physical targets of production of foodgrains for 1988-89

(In million tonnes)

State	Rice	Wheat	Coarse Cereals	Pulses	Total Foodgrains
1.	2.	3	4	5	6
1 Andhra Pradesh	8 36	0 01	2.50	0.60	11 47
2 Assam	3 00	0 16	0 20	0 07	3 43
3 Bihar	6 16	3 64	1.20	0.90	11.90
4. Gujarat	0 89	1 70	2.50	0 60	5 69
5 Haryana	1 87	5 30	0.75	0.60	8 52
6 Himachal Pradesh	0 13	0 44	0 58	0.02	1 17
7. J & K.	0 60	0 25	0 45	0.03	1 33
8 Karnataka	2.30	0.20	4.10	0 60	7.20
9 Kerala	1 10	—	0 03	0 03	1 16
10 M P	5 30	5 10	3 49	2.50	16.39
11. Maharashtra	2.55	1 15	6 00	1.10	10 80
12 Manipur	0.36	—	0.01	—	0.37
13 Meghalaya	0 12	—	0.03	—	0.15
14. Nagaland	0.13	—	0.01	—	0 14
15. Orissa	5.53	0.14	0 60	1.00	7 27
16. Punjab	5.61	11 80	0.60	0.20	18 21
17 Rajasthan	0.15	4.00	3.90	1 70	9 75
18 Sikkim	0.02	0.02	0 05	—	0 09
19 Tamil Nadu	5.41	—	1.70	0 30	7.41
20. Tripura	0.40	—	—	—	0.40
21 Uttar Pradesh	8.90	17 50	4 10	2.80	33.30
22. West Bengal	8.70	0.90	0.13	0.25	9.98
23. Arunachal Pradesh	0 13	0.01	0.05	—	0 19
24 Mizoram	0.05	—	0.01	—	0.06
25. Goa	0 18	—	0.01	—	0.19
Total	67.95	52.32	33.00	13.30	166.57

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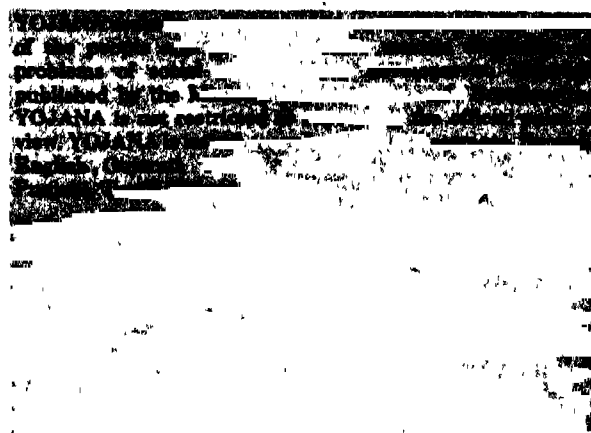
Raising production of pulses

Dr. S.S. Khanna & Dr. M.P. Gupta

The authors have made an indepth study into making the prospects of pulse production brighter. They point out that present per capitu pulses availability in India is much below the minimum pulse requirement as recommended by WHO/FAO. Moreover, the area, production and productivity of pulses has remained almost static during the last 30 years. Therefore, there is a great need for vigorously implementing the Pulses Development Project to keep pace with the growing demand, for pulses, feel the authors.

IN THE PREDOMINANTLY VEGETARIAN population of India, pulses are an important source of dietary protein. In addition, they are also a rich source of energy, minerals and certain vitamins. (Table 1) Further, the amino-acid composition of pulse protein is such that a mixed diet of cereal and pulse has superior biological value than either of the components alone. Consequently, pulses play a key role in correcting the widespread malnutrition in the country. In the global context, pulses are now gaining ever increasing importance. In the developed countries, recent indications about positive correlation or arterio-sclerosis with diets rich in saturated fatty acids on one hand and reported decrease in blood cholestrol level with inclusion of pulses on the other, have led to growing realisation of substituting a part of animal protein by vegetable protein.

Besides their nutritional value, pulse crops are endowed with unique property of maintaining and restoring soil fertility through biological nitrogen from the atmosphere as well as of conserving and improving physical properties of soil by virtue of their deep and well spread root system. The leguminous crops and trees add more nitrogen to our soils than the total fertiliser nitrogen produced in the country. Pulses also provide nutritious green fodder and feed to the livestock.

India has a distinction of being world's largest producer of grain legumes (pulses). Over a dozen pulse crops are grown over an area of 22 to 23 million hectares adding 10 to 13 million tonnes of grains to the food basket of the country. Chickpea (gram) and pigeonpea (arhar) are the major pulse crops occupying together 45 per cent of the total pulse tonnage. The other important pulse crops are mungbean, urdbean, cowpea, mothbean, lentil, peas, horsegram and lathyrus. The major pulse growing states of the country in order of their significance are Madhya Pradesh, Haryana and Tamil Nadu. The other states like West Bengal, Punjab and Gujarat are also considerably important. Remaining states have only limited area under pulses.

Over past three decades the are a (21 to 23 million hectares), production (10 to 13 million tonnes) and productivity (475 to 547 kg/ha) of pulses remained almost static whereas the population increased manifold. As a result of this the availability of pulses per capita declined sharply from 64g in 1951-56 to less than 40g in 1985-86 as against the FAO/WHO recommendation of minimum pulse requirement of 80g per capita.

Trends in production

The average production of pulses increased from an average of 10.97 million tonnes during the quinquennium ending 1981-82 to 12.36 million tonnes during the quinquennium ending 1986-87. The area, during the period expanded marginally from 23.14 to 23.32 million hectares, but the productivity increased substantially from 474 to 530 kg. per hectare. The production of pulses touched a record level of 13.36 million tonnes in 1985-86 both through the increase in area and improvement in productivity. In 1986-87, due to drought conditions the area under the crop decreased and the productivity also declined. As a result, the production came down to a level of 11.74 million tonnes (Table 2). A target of pulses production of 14.5 million tonnes for 1987-88 is not likely to be realised due to shrinkage in area and poor growth of kharif pulses in almost all the major producing States of the country.

Tur (Arhar)

The production performance of tur, which is a fair degree drought resistant crop, presents quite a promising picture. Between the quinquennia ending 1981-82 and 1986-87, the area under the crop expanded from 2.77 to 3.14 million hectares and the average productivity improved from 706 to 757 kg. per hectare. As a result, the output of tur increased from 1.95 to 2.38 million tonnes. Even under severe drought conditions, the output of tur during 1987-88 is expected not to be very different from the level of 2.32 million tonnes harvested in 1986-87.

TABLE -1

Nutritional composition of pulses (100 g of dry edible parts)

Crops	Energy (K cal)	Protein (g)	Oil (g)	Total Carbohydrate (g)	Fibre (g)	Ash (g)	Ca (mg)	P (mg)	Fe (mg)
Pigeonpea	383	21.9	[illegible]	72.7	8.1	4.2	179	316	18.6
Urdbean	365	23.5	1.6	71.9	4.9	3.8	123	390	9.4
Mungbean	381	25.6	1.3	69.2	4.9	3.9	118	370	7.9
Cowpea	316	25.6	1.7	67.5	13.7	5.1	376	365	6.0
Mothbean	378	20.7	1.3	72.5	5.1	3.3	190	332	—
Chickpea	396	19.4	5.5	70.5	7.4	3.4	280	301	12.3
Lentil	393	26.9	0.8	67.8	4.3	3.2	71	331	7.7
Peas	391	25.6	2.3	65.5	9.1	4.1	91	331	6.6
Frenchbean	318	22.1	1.7	69.9	15.9	6.2	316	425	12.4
Lathyrus	379	29.9	1.2	65.2	8.0	3.6	—	447	10.9

Moong

The production of moong increased from an average of 0.90 million tonnes during the quinquennium ending 1981-82 to 1.17 million tonnes during the quinquennium ending 1986-87. The area during this period increased from 2.65 to 2.97 million hectares and the productivity rose from 338 to 394 kg. per hectare. The production of moong after touching a level of 1.18 million tonnes in 1985-86 declined to 1.09 million tonnes in the following year. This happened despite expansion in area under the crop as the yield declined from 392 to 348 kg. per hectare.

Urad

The production of urad has increased gradually over time. The output of crop increased from an average of 0.84 to 1.16 million tonnes between the quinquennia ending 1981-82 and 1986-87. The area expanded from 2.55 to 3.02 million hectares and the productivity improved from 329 to 385 kg. per hectare. In the recent period, after touching a level of 1.24 million tonnes in 1985-86, the production declined to 1.22 million tonnes in 1986-87.

Gram

During the last ten years the production of gram has not been able to touch even once the level of production of 5.88 million tonnes achieved in 1975-76. The output of gram during eighties has fluctuated between 4.33 million tonnes in 1980-81 and 5.68 million tonnes in 1985-86. In 1986-87, the output was 4.45 million tonnes. The area under the crop during eighties fluctuated between 6.58 million hectares in 1980-81 and 7.87 million hectares in 1981-82 . During the last decade significantly locational shifts in acreage under gram has taken place. Whereas the area under gram declined in the high productivity states of Punjab, Haryana and Uttar Pradesh, it increased in the low productivity. states.

The compound growth rates of area, production and yield of pulses during 1949-50 to 1985-86 were 0.32, 0.32 and 0.17 per cent per annum respectively. Whereas, during 1949-50 to 1964-65 these were 1.90, 1.39 and -0.22 per cent per annum respectively. The growth rates in the post-green revolution period of 1967-68 to 1985-86 were of the order of 0.44, 0.65 and 0.29 per cent per annum respectively.

It shows that all the growth rates in case of pulses are low and below 1.00 per cent per annum.

The compound growth rates of area, production and yield of pulses during triennium ending 1979-80 and 1986-87 were 0.17, 1.81 and 1.65 per cent per annum respectively, showing that the increases in productivity was mainly responsible for higher growth rate.

The declining trend in gram production is due mainly to the shift from gram to wheat in the important gram producing states of Uttar Pradesh, Haryana, Punjab and Bihar. Acreage and output of gram have also been declining in Karnataka. West Bengal and Andhra Pradesh. On the other hand, significant expansion has taken place in gram acreage and output in Madhya Pradesh, Rajasthan, Maharashtra and Gujarat during this period. But the incremental output from these States has not been sufficiently large to offset the decline in the other States. It is quite unlikely that gram would be able to stage a comeback in the northern wheat belt unless there is some technological breakthrough. In fact, expansion of irrigation in these areas could lead to further erosion in its acreage as the relative profitability of irrigated wheat is much higher than that of gram. It is only in areas where the availability of irrigation is limited and is not adequate for raising a good crop of wheat, but is sufficient to meet the modest requirements of gram, that gram would appear to have a comparative advantage. This seems to explain the expansion of irrigated gram acreage in Madhya Pradesh, Rajasthan, Maharashtra and Gujarat.

One of the disturbing features in production of pulses that is noticed is that not only area of pulses remained almost stagnant, its productivity has not shown any improvement. Yield per hec of pulses which was 539 kg. in 1960-61 came down to 524 kg. in 1970-71 and 508 kg in 1986-87. Of course, there was a slow increase in productivity during the eighties when it increased from 519 kg. in 1982-83 to 547 kg. per hec. respectively in 1985-86.

TABLE —2

Pulses: Area, Production and Yield-All-India

Area : '000 hectares
Production '000 tonnes
Yield : Kgs/hectare

Pulses	*1977-78*	*1978-79*	*1979-80*	*1980-81*	*1981-82*	*1982-83*	*1983-84*	*1984-85*	*1985-86*	*1986-87*
1	2	3	4	5	6	7	8	9	10	*11*
Gram										
Area	7974	7708	6985	6584	7868	7399	7161	6904	7805	6781
Production	5410	5739	3357	4328	4642	5290	4751	4561	5788	4455
Yield	678	745	481	657	590	715	663	661	742	657
Tur										
Area	2626	2635	2731	2842	3004	2926	3218	3155	3184	3236
Production	1930	1887	1757	1957	2237	1989	2576	2585	2441	2516
Yield	735	716	643	689	745	680	801	819	767	716
Moong										
Area	2437	2547	2594	2843	2853	2797	3061	2838	3002	3135
Production	870	876	698	979	1060	1159	1367	1054	1176	1092
Yield	357	344	269	344	373	414	447	371	392	348
Urad										
Area	2172	2274	2719	2830	2775	2771	2998	2908	3187	3227
Production	747	727	757	659	1010	998	1192	1164	1239	1216
Yield	344	320	278	339	364	360	398	400	389	377
Other pulses										
Area	8288	8493	7230	7358	7343	6940	7104	6934	7240	6707
Production	3016	2954	2003	2404	2558	2421	3007	2599	2717	2658
Yield	364	348	277	327	348	349	423	375	375	396
Pulses										
Area	23497	23657	22259	22457	23843	22833	23542	22737	24418	23086
Production	11973	12183	8572	10627	11507	11857	11857	12893	13361	11737
Yield	510	515	385	473	483	519	548	526	547	508

Constraints in pulses production

As compared to cereals productivity-wise pulses are ıot poor. But their own virtue to give more yields even ınder more adverse conditions has pushed them to more nd more neglected areas. The major constraints, in eneral, are as follows:

lgroecological constraints: The intrinsic character- stic of pulse crops to make more efficient use of the carce farm resources has gone against it as over 92 per ent of pulses are grown in rainfed areas. The uncertain nd erratic rainfall create a formidable barrier for timely lanting and desired plant stand. The marginal and ubmarginal lands occupied by pulses are generally oor in soil fertility and moisture retention capacity and herefore, yields are poor.

Biological constraints: The pulses are highly prone o a large number of insect, pests and diseases as ompared to cereals and other crops. Several fungal, acterial and viral diseases such as wilt, blights, leaf pots, mosaic, etc. feed on these crops and drastically educe their yields. Stored grain pests cause considerable oss to pulses, compelling farmers to sell their produce mmediately after harvest. These havocs discourage armers to take up pulses cultivation on large scale.

Management/Institutional constraints

ı) *Seed production:* The inadequate availability of nproved varieties of seeds of pulses continues to be a stumbling block for increased pulses production. The seed production programme of pulses crops was almost non-existent until recently, As a result of this, the improved varieties could not reach the farmers and traditional land races which are poor yielders and susceptible to a large number of diseases, are grown.

(b) *Research:* Despite the fact that India is the chief pulse producing country in the world the possibility of inflow of research informations from other countries parallel to rice and wheat is practically zero. The research base on pulses as a whole is miserable.

(c) *Extension.* The extension agencies are concentrating mostly on cereals and their attention on pulses programme is very limited. The technology gap between research institutes and farmers level is very wide. The available technology has the potential to double the present level of productivity but there is urgent need for agronomic extension approach.

(d) *Plant Protection:* Pulses are prone to insect pests and diseases. No sincere efforts have been made to avert the losses caused by them. It is ironical that even after raising a successful crop of pulses, the farmer has to undergo heavy losses because he fails to control insect pests as he does not have enough resources to buy sprayers/dusters and insecticides.

(e) *Microbiological culture and quality control:* It has been established that yield of pulses can be stepped up substantially by use of efficient Rhizobium culture, but

unfortunately the facilities available for the production are not sufficient.

(f) *Processing technology:* The conventional milling of pulses is laborious, time consuming, completely dependent on weather and subject to high losses of the edible portion. It is estimated that about 1.5 million tonnes of pulses valued at Rs. 750 crore are lost directly or indirectly annually due to inefficient milling technology. There is need for modernization of processing machines and establishment of small scale dal milling units in the villages.

(g) *Socio-economic constraints:* Pulses have only subsidiary status in the total farming system of peasants, perhaps because of several prevalent notions and beliefs which determine farmer's response like (i) cereals are the staple food, (ii) pulses are not major cash crops being mainly consumed at the farmer's family level, (iii) pulses may not be able to exploit a good resource base, (iv) low stability of production of pulses due to number of diseases and insect pests and (v) high damage in storage and highly fluctuating post harvest prices and other associated problems of local level marketing.

Programmes in Five Year Plans

Sixth Plan: During the Sixth Plan, special thrust was given on raising pulses' production. The production target for Sixth Plan was kept at 14.5 million tonnes against the base of 11.6 million tonnes. The strategy for achieving this increase in production consisted of:

- (a) introduction of pulse crops in irrigated farming systems;
- (b) bringing additional area under pulses of short duration varieties;
- (c) inter-cropping of pulses with other cereals;
- (d) multiplication and use of improved pulse seed;
- (e) adoption of plant protection measures;
- (f) use of phosphatic fertilisers and rhizobial culture;
- (g) improved post-harvest technology,
- (h) remunerative pricing and
- (i) organisation of 'pulse crop village,in various blocks. The centrally sponsored Scheme on Development of Pulses has been in operation since 1972-73 and efforts were made to increase pulses' production through adoption of a package approach. The scheme was continued during the Sixth Plan, but its impact is yet to be realised.

Seventh Plan: Seventh Five Year Plan lays considerable emphasis on increasing the productivity of various pulse crops. The present level of productivity of pulses is low and therefore, there is considerable scope to increase the productivity through the implementation of Pulses Development Project wherein all efforts will be made to increase the adoption of improved package of practices. Efforts will be made to increase the productivity of gram, arhar, kharif moong/kharif urad, lentil and peas by production of certified seeds variety and distributing it to the farmers. Fertiliser, pesticides and plant protection equipments will be made available at the appropriate time. Besides monetary inputs like timely sowing of seeds of recommended varieties with recommended spacings surveillance against pest and disease attack with strong extension effort will be followed. As a result of all these measures, the level of productivity of pulses will be raised from trend line estimate (1967-68 to 1983-84) of 476 kg of yield per hectare to 600 kg per hectare at the end of the Seventh Plan.

From the year 1986-87, the National Pulses Development Project (N.P.D.P) has come in operation. The basic objective of N.P.D.P. is to increase production of pulses by adopting location specific technology. In this project thrust is given to launch crop and area specific programme with regard to major pulses crops like Gram, Arhar, Peas, Lentil, Moong and Urd. This project is a district-oriented mission and is expected to achieve the increased level of productivity within a time frame. It also provides enough scope of adoption of twin technology of production by horizontal (increasing area) and vertical (yield per unit of area) means.

During the Eighth Five Year Plan considerable emphasis has to be given on increasing the productivity of various pulse crops.

Until the end of the 6th Five Year Plan mandate of I.C.A.R.'s Directorate of Pulse Research at Kanpur in spite of its broad objectives, was confined to coordinating the research activity of different centres in the country under the All India Coordinated Pulses Improvement Project. However, during the final phases of the Sixth Plan, the mandate of the Project had been gradually enhanced and is now designed to cater to the overall increase of pulses production in the country. Keeping in view the overall demand of pulses and its likely increase by 2000 AD, the project has now to intensify efforts and activities in tune with this objective. Multi-disciplinary approaches have to be adopted for efficient improvement of different pulses individually and collectively, for pulses crop and inter crop situations multiple cropping and in non-conventional areas.

Technology to raising production

Whereas according to field demonstration experimental trials significantly higher yields are achievable under optimum conditions, the yields actually obtained on the farmers' fields are much lower. All pulses taken together are reported to account for just about 1 per cent of total fertiliser consumption in the country. The major task, therefore, lies in motivating farmers to adopt full package of practices for raising crop yields. Under the newly introduced Centrally Sponsored Programme for assisting the Small and Marginal Farmers in increasing agricultural production, minikits of pulses comprising seeds fertilisers and rhizobium culture are being distributed free. The programme appears to have evoked good response in all the States and is to be commended. The continuation of this programme in addition to the other development programmes should expand the coverage

under improved varieties as well as output of pulses specially gram. Plant protection is an important element in raising gram yields because of heavy incidence of frost, pests and diseases. However, despite liberal subsidies given by Government, the coverage under plant protection remains rather limited.

Recent technological advances

Recently, a large number of improved varieties of different pulse crops have been evolved which are capable of enhancing and stabilising production. It may be noted that aggressive variety development programme has checked the declining trend in areas where irrigation has been introduced. Some of these varieties for different pulse crops are listed below:

Crop	Variety	Area for which recommended
Gram	Pusa 209	North Plains, East Zone and Peninsular Zone
	G.G. 588 BGM 408	North Plains West Zone
	BGM 413	North Plains East Zone
	H 75-35 (Gau-raw) GNG 146	North Plains West Zone
Arhar	Bahar	North Plains East Zone
	BDN 1, BDN 2	Peninsular Zone
	DA 11, DA 6, MA 96	North Plains East Zone
Moong	ML 131, ML 267 Pant Moong 2	Entire country
Urad	Pant U 19 Pant U 30 UG 218	Entire country
	LBG 17	Peninsular Zone
Peas	Rachna	Entire country
Lentil	Pant L 639	Entire country
Rajmah	PDR 14	Entire country

Results of agronomic research clearly revealed that time of planting, one of the non-monetary inputs, has profound effect on the productivity of pulses. Similarly, pulse-based sequential and intercrops having higher productivity, stability and land utilisation efficiency have been evolved and standardised. The relative importance of various production inputs of the improved package technology has been perfected. It has been clearly demonstrated that effective weed control and fertiliser use (18-46-0) are the most important production inputs. The beneficial effect of seed inoculation with Rhizobium culture in boosting up pulse production has been proved beyond doubt. Timely application of plant protection measures could bring substantial increase in productivity. Efficient schedule and method of insecticide use has been evolved.

Proposed strategy in 8th plan

1. *Area expansion* : With increase in irrigation potential, there has been shift in the cropping pattern from low profit crops to more remunerative ones with the result that the area under pulses has gone down. Efforts should be made to bring in more area under pulses, especially on marginal land. In this way, we would be able to increase the total production of pulses in the country.

2. *Low productivity* : Major inputs that influence the productivity of pulses are quality seeds, fertilisers, rhizobium culture, pesticides and plant protection methods. Besides, non-monetary inputs like timely sowing with recommended seed rates and surveillance against pests/diseases are also not generally followed. If proper techniques are adopted in view of the above mentioned facts, the productivity of pulses can be increased manifold.

3. *Research technology*: In traditional agriculture pulses have been grown under rainfed conditions. In general, pulses are not responsive to high inputs. Researches are being carried out to identify and develop genotypes responsive to irrigation and high inputs. However, with a view to increasing the area of pulses and early maturing photo insensitive varieties have been developed. As the pulses are mostly grown on marginal lands under rainfed conditions, so the droughts in deficient rainfall years and pests and diseases in wet years are the problems. So, the I.C.A.R. and agricultural universities must evolve suitable varieties of pulse crops to meet the challenges and provide respectable yield of about 1.0 tonnes per hectare. Varieties of various pulses, evolved by ICRISAT, which have potential for increasing yields should also be adopted.

4. *Availability of Credit* : There is lack of availability of credit for pulses including crop loans. Efforts should be made to make credit available to the farmers so that they can use modern technology for pulses production.

5. *Extension support* · Pulses technology cannot be successfully popularised unless extension support is there and farmers are trained fully. Suitable packages of practices are not effectively carried out by the extension workers in the field. Strong extension support to this programme is lacking.

6. *Soil nutrients*. One of the constraints in pulses production is the availability of soil nutrients. Phospherous largely and zinc to some extent had been a problem in Indian soils. So a special thrust is to be given for supply of needed plant nutrients.

7. *Irrigation management* : Major constraint in stepping up pulses production is the fact that about 90 per cent of the area under pulses is rainfed. While the percentage of irrigation under pulses is low, in aggregate at the all-India level, it is fairly high in the states like U.P. Gram area under irrigation is also high in the states of Haryana, Rajasthan and U.P. In many command areas water rotation does not coincide with crop requirements, which is particularly true in the case of summer moong. This is one reason why farmers prefer to grow summer moong under well irrigation and not canal irrigation.

8. *Price support and marketing* : There is wide gap between the price received by the farmers and those paid by the consumers. In fact, prices of whole pulses are not that attractive as the margin between prices of

(Contd. on page 12)

Consolidation of foodgrains production

Navin Chandra Joshi

Here, the author focusses attention on the insufficient production of oilseeds, pulses and sugar entailing heavy imports at the cost of our foreign exchange. He pinpoints certains factors responsible for this phenomenon. To fill the gap, the author feels, it is imperative that scientific soil testing, water management and other improved agricultural proactices, coupled with judicious use of inputs are urgently introduced.

THE PLANNING COMMISSION HAS initiated measures to operationalise an agricultural production plan for achieving a target of foodgrains production of around 175 million tonnes by 1989-90, the terminal year of the Seventh Plan. Under the action plan, foodgrains production would be of the order of 166 million tonnes in 1988-89. Technology would form an integral part of the plan and detailed monitoring is envisaged as an aid to the efficient management of the proposed strategy.

While 169 districts in 14 States have been approved for concerted efforts to raise production, a few more districts may be added to the list as a separate category where special efforts could continue with resources provided by the State Governments. The 14 States identified for the thrust programme are: Andhra Pradesh, Assam, Bihar, Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Orissa, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh, and West Bengal.

The strategy for increased production is based on increased use of fertilisers and improved seeds, better management of weeds, control of pests and diseases, harnessing of water resources and incentives to farmers. The 169 potential districts have been selected on considerations of soil condition, water availability, technological package available in the region and existing level of development and agricultural growth. The action plan has identified focus crops which have potential for higher yields. These crops are rice, wheat, maize, gram and arhar.

Rabi prospects bright

The beating that kharif production took in 1987-88 is being somewhat offset by a promising rabi this year. There have been reports that the delayed winter rains had brightened rabi prospects in Punjab, U.P., Haryana and Madhya Pradesh. Wheat production was much better in these States even as rice production improved in Karnataka, Tamilnadu and Orissa. The fear that last year's drought would adversely affect rabi production by 15 to 20 per cent has luckily not come true. The shortfall in grain prodction in 1987-88 will not be more than 10 to 11 million tonnes from the 1986-87 level of 144 million tonnes.

Now the foodgrain production strategy has been fine-tuned for different agro-climatic zones. It includes increased fertiliser use by 20 kg of nutrients per hectare, use of improved high-yielding variety seeds, better management of weeds and timely control of pests and disease, harnessing of ground water throgh tubewells, completing on-farm development works in command areas and competing the near completion irrigation projects and efficient use of stored water, bonus and incentive for procurement and production of foodgrains, and increased flow of short-term and long-term credit.

Pulses in background

In the green revolution areas, over the years, the cropping pattern has been shifting from pulses to wheat and rice. The increase in pulses production in the non-wheat states failed to offset the decline recorded in the wheat-belt. Pulses production in the country today is, by and large, confined to unirrigated dry or rainfed tracts. The relegation of pulses cultivation to dry and marginal lands reflects the inadequacies of the institutional arrangements for supporting their production. There has not been any breakthrough in technology in terms of input-responsive and high-yielding short-duration varieties. Unless pulses cultivation is more remunerative, any emphasis on non-monetary inputs may not produce much results. However, from the farmer's viewpoint price alone is not important when his

per hectare return is poor. While productivity of wheat and rice has risen noticeably, that of pulses has remained stagnant due to gross neglect. Today, the average yield for wheat and rice are 2032 and 2338 kgs per hectare while that of pulses is only 653 kgs. Obviously, pulses production has been pushed to unirrigated areas.

Uplifting rice growers

As for rice, in India there has not been any widespread or significant improvement like in the case of wheat farming. The regions which mainly grow rice, like those in the East, have remained relatively backward agriculturally. While new researches are quite encouraging for successive double or triple rice cropping, followed by some other short-duration crop, the fact is that raising the yield by itself may not always lead to increased incomes for the grower. The International Rice Research Institute is now trying to identify income-generating component technologies. These include activities like animal products from crop residues and fish rearing during the wet season and some subsidiary vocations like mushroom production, paper from straw and rice husks. However, the rice revolution can take off only when farmers are convinced that it helps to maximise their income and not just the yield as most rice growers are small farmers.

Raising oilseeds' yield

The Seventh Plan envisages an increase in the production of oilseeds from a level of 12.95 million tonnes in 1984-85 to 18 million tonnes in 1989-90. National Oilseeds Development Project has been the major strategy since 1987 in 180 selected districts in different oilseeds growing States. Area under oilseeds is being increased by introducing various sequential and intercropping systems in both rainfed and irrigated conditions and through diversion of area from low-yielding and low profit crops to oilseeds.

Current stocks of foodgrains, particularly wheat, are excessive in relation to its demand, while not enough oilseeds and sugar are produced within the country, entailing heavy imports at substantial cost of foreign exchange. Import of pulses has also been placed under Open General Licence as the domestic production falls considerably short of requirements. Of late, an impression has been gaining ground that agricultural production has reached a plateau. According to this view, production of foodgrains, after achieving a peak in 1983-84 has stagnated or come down, and that the rate of growth in agricultural sector has decelerated. However, a close analysis of production and productivity shows that both increased over the years and the trend continues.

Regional imbalance

One of the chronic problems of our development is regional imbalance. Although rice is the principal crop in the eastern region, the per unit area production is low compared to the national average. The problem of poverty in eastern India can be solved only by stepping up the paddy yields. A centrally sponsored Special Rice Production Programme has therefore been taken up in 430 blocks in six States of Assam, Bihar, Madhya Pradesh, Orissa, Uttar Pradesh and West Bengal. It is heartening to note that the programme has started yielding encouraging results. Still, however, regional imbalance has become a matter of serious concern. For example, agricultural production and productivity in north-western States like Punjab, Haryana and Western Uttar Pradesh is very high and comparable with the best in the world. However, in eastern States like Assam, Bihar, West Bengal and Orissa, production and productivity are very low. This kind of disparity must be done away with by making extra-ordinary efforts so that people all over the country get benefits of development. Further, if the imbalance between regions and crops increases, as it is more likely to, food subsidies will escalate further. These subsidies need to be brought under control by improving the buying capacity of farmers in the less developed regions. That is to say, it is imperative to bring about agricultural growth more evenly spread.

Widening gap

Another significant aspect is the inordinate delay in the execution of irrigation projects; as not a single project in the irrigation, power or flood control sectors has been completed within the time schedule and within the estimates. From the details of cost of ongoing major irrigation schemes of the Sixth Plan, it is now found that the estimated cost turned out to be more than Rs. 12,000 crore which meant an increase of 200 per cent over the original estimates of Rs. 4, 025 crore. As many as 32 of these projects had cost overruns of 500 per cent or more. There is already a growing hiatus between the irrigation potential created and its utilisation. The present gap is estimated to be 7.5 million hectare —5.2 million hectare in major and medium projects and 2.3 million hectare from minor irrigation— on a total of 70 million hectare irrigation potential created. The Seventh Plan talks of over 25 million hectare of additional irrigation potential being created, while its utilisation has been put at 19 million hectare, thus leaving a gap of 6 million hectare. The gross irrigated area in the country was 22.6 million hectare in 1950-51 and the projected figure for 1989-90 is 80.4 mhectare.

What is needed

There is a shortfall in the supply of irrigation as against demand but what is more distressing is that the potential created is not at all optimally utilised. We need to devote more attention to minor irrigation projects on a massive scale for better utilisation of irrigation facilities. Keeping this aspect in view, it is imperative that scientific soil, water management and other improved agricultural practices, coupled with the judicious use of inputs, are urgently introduced. Despite many rapid strides in agricultural production, there is no room for complacency. There are still many more gaps to be filled and loopholes to be plugged if we are to achieve target of 230 million tonnes by 2000 A.D.

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How to combat agricultural drought

K.K. Nathan

Drought creates more disastrous situation than floods owing to its prolonged nature. Flood has a peak stage for few hours only. Simple packages to combat drought are available. However, according to the author, an open discussion between technologists, scientists and policy makers to recognise short-range forecasting, climatic monitoring systems and climatic probability statistics will enhance 'drought planning' and 'drought awareness'.

DROUGHT HAS MANY FACETS AND definitions. Its impact on agriculture is of special significance because of the imbalance it creates in food and livestock security. Rainfall aberration often leads to soil moisture deficiency at the rootzone of crops. The soil moisture particularly at the critical crop growth stages results in low yield. In fact, drought creates more disastrous situation than floods owing to its prolonged nature. Flood has a peak stage for few hours only. Severe or chronic drought often brings episodic events like poverty, malnutrition, famine, riots, etc. The effect of drought depends on the storage of buffer provided by the physical structure of the soils and capacity of reservoirs. Occurrence of drought and its severity are relative species (plant, animal, bird etc.) that might be affected and to the adaptability to moisture stress depending on the age, season and management practices.

However, simple package practices and techniques are available to combat agricultural drought which involves an integrated approach to improve water uptake by crops, water storage conservation, agronomic practices, crop management drought prediction, and monitoring etc.

Agronomic practices and crop management cont tillage and conservation practices will enhance r penetration and retains moisture in the soil. It beneficial to grow short duration crops. It is found t crops with closed space rows develop fairly e effective crops canopy which minimises the soil moist evaporation loss. One of the compensatory progran that can be carried during agricultural drought invo 'deep seeding' where dry surface of the soil is opene place seed in the moist zone for post-rainy crops.

Another important technique often adopted ratooning of drought affected crops like sorghum millet. Ratooning is supposed to be a High-T management system during agricultural drou However, its success depends on the general vigou drought affected crops.

Drought often reduces the turgidity of plant cells four types crop selection is made which comprise drought escaping crops, drought evading type, drou enduring variety (without injury) and drought resists crops. The selection of crops for water deficient reg should have a deep root system with less lat extension for better drought resistance. Benefi packages for crop selection during drought inclu early root penetration, high root-shoot ratio, less numbe small leaves for low transpiration, large pod, angul oriented leaves during *kharif* season for better light efficiency (due to cloudiness), horizontally orien leaves for *Rabi* season for better dew collection etc.

Watershed management programme should conti as a big scale and the runoff should be stablized. Th should be integrated investigation of both surface ground water in a catchment. Also the geometry of basin or watershed should be understood for in basin transfer study.

Improving water use efficien

The success of crop production during drou period depends on how best the scanty rain wate

conserved and utilized. Some of the simple technological packages which farmers can adopt to improve water use efficiency of crops include early sowing, minimum tillage, chemical fallow and stubble mulching. It is found that reduction in tillage do not damage the soil structure and it enables higher production per unit of water supply.

Another strategy to improve water use efficiency is to build contour tanks (or terraces on land) with a slope 2% to 10% to prevent runoff. A national net work of soil water conservation programme can be initiated to implement 'conservation catchment' scheme for effective water use efficiency. Suggestions are also made to use anti-transpirants, reflectants wind-breaks etc. to arrest evapotranspiration in crops.

Other significant packages

Crops can be grown in the deficient rainfall zones provided some rain water catchment basin is built around it so that rainfall water can be forced from larger than normal area to irrigate crops. Micro-catchments are more efficient than large scale water harvesting schemes because of the minimum conveyance losses. It is found that even light intensity rain can provide runoff in such catchments. □□□

Drought prediction and monitoring

Timely monitoring of drought is very useful on real time basis based on simple effective methods. Drought watch system based on rainfall analysis demarcates drought prone areas in time and space. Drought watch system should be monitored at block level or district level based on weekly rainfall probability analysis. The risk of defined rainfall situation can be estimated and predicted with confidence using first stage models of rainfall process like compound poison model.

Remote sensing technique can assess and predict drought by monitoring water status in the soil and crop. Crop vigour, irrigation scheduling and yield prediction can be monitored by this technique. However, a thorough understanding of large scale atmospheric system over the globe besides micro and local climate may significantly improve drought prediction.

An open dialogue between technical experts and policy makers will enhance the importance of drought planning. It is quite essential to recognise the shortrange forecasting,climatic monitoring systems and climatic probability statistics which the scientists and technologists may discuss with the policy makers for better prediction. □□□

(Contd from page 8)

split pulses (those paid by consumers) and whole pulses (those received by the farmers) is quite high which is usually going to middlemen. The benefit of prices would go to the farmers if marketing system of pulses is streamlined. There is need for procurement through cooperative agencies when prices fall below the support levels. As the marketable surpluses in pulses are generated in small quantities and that too by small farmers it is desirable to extend market support to these people as and when the need arises.

9. *Setting up of Dal Mills in Cooperative sector* : In order to safeguard the interest of farmers as well as the consumers, it is necessary that pulses are procured by cooperative agencies from the farmers and supplied to the consumers after processing at milling units established by the cooperative agencies and marketed through public distribution system cooperative infrastructure at reasonable prices This will eliminate/ minimise the stronghold of the private traders/ middlemen and exploitation of farmers/consumers by them. □□□

Rs. 57 crore for rice production programmes

The Centre has allocated more than Rs. 57 crore to the States for 1988-89 to accelerate rice production in the country under two major thrust programmes.

One hundred and six districts in 13 States have been selected for 'Special Foodgrains Production Programme Rice' which is being implemented from the current year The 'Special Rice Production Programme' is being implemented in 430 blocks in Assam, Bihar, eastern Madhya Pradesh, Orissa, eastern Uttar Pradesh and West Bengal since 1985-86. Nine blocks of Tripura have been selected for this programme from 1988-89. These programmes would seek to increase the coverage of location-specific high yielding varieties and popularise improved production technology. The strategy includes efficient use of resources through better supply of inputs; and improved extension services and infrastructural facilities. □□□

Big farmers versus small farmers

Bharat Dogra

Often while voicing the demands of farmers or describing the condition of farmers, they are spoken of as a huge homogeneous group with similar problems and interests. But the condition of small and big farmers may differ, says the author, with respect to irrigation, credit, marketing etc. resulting in lower costs per acre and higher sales receipts per acre for big farmers operating in the same village.

ACCORDING TO THE PLANNING COMMISSION (1985) "Small and marginal farmers with holdings of lands upto 2 hectares represent about 73 per cent of the land holding but are cultivating only about 23 per cent of the cropped area. Their yields are low and land is of poor quality. The number of persons which each hectare of their holdings has to sustain is 4 to 5 times more than the number of dependent persons per hectare of land held by the big farmers."

Thus if we look at the Indian farmers, then most of them are small farmers. However, if we look at India's farm land, then most of it is not in the hands of small farmers. Most development effort is initiated in the name of small farmers but in fact most of its benefits do not reach the small farmers. Most of the farmers movements are also launched in the name of helping the poor small farmer, in fact the small farmer is left far belind in the leadership, decision-making and finally the real benefits of such movements.

A question of great importance for the economy and politics of India today is— to what extent are the economic interests of the small farmers similar to those of the big farmers and to what extent there is a conflict of interests? To what extent is it right to group together all farmers as one category in a movement of all farmers which raises demands common to all farmers without in any way differentiating between the small and the big farmers?

Irrigation

In the case of canal irrigation big influential farmers may divert the water to their fields on a priority basis denying water to the smaller farmers. In the case of tybewell irrigation, the big farmer may sell water to the small farmer, who does not own a tubewell, at a very high rate. By adopting more remunerative but also more water-intensive crops at an early stage, big farmers use up most of the available scarce groundwater. The smaller, low-resource farmers just may not be able to grow these crops, or else their costs of growing these may increase substantially relative to those of big farmers as a result of purchasing water at a high price. Even though from the point of view of considerations of equity, optimum use of water and long-term conservation of water it is desirable that highly water-intensive crops should not be grown in an area where big farmers still insist on doing so to earn high immediate profits for themselves.

Inputs and knowhow

Due to their better relations with officials and their higher education, big farmers' families are generally able to have better access to the latest farming recommendations, new seeds, fertilisers and pesticides. Although special arrangements have been made from time to time to benefit the small and marginal farmers, in many areas the big farmers have been able to distort these schemes to their own advantage. Demonstrations to prove new technology are generally held on the fields of big, influential farmers which also fetch them subsidies and economic benefits. Often a new crop gives best returns only in the early stage, while in the later stage when the market is saturated with the crop the returns are much lower. The big influential farmers are generally the ones who take advantage of the higher returns in the early stage.

Other sources of earning

Big farmer generally have higher income from secure jobs as well as investments in transport, brick-kilns etc. Some of them secure substantial economic gains by

occupying (or selling) community land, ponds etc. New farming practices have also brought several new sources of earning such as the production of seeds, the agency of inputs, higher grain trade, money lending, hiring of farm machinery etc. from which only the big farmers can be benefited due to their resource base.

Credit

The big farmers, due to their own resource base and also easier accessibility to institutional credit, either do not have to pay any interest on working capital or else have to pay a relatively low interest rate. On the other hand the small farmers are frequently forced to borrow their working capital from traders (and sometimes from the big farmers themselves) at a much higher rate of interest

Seasonality of agricultural work

To get a good crop the various agricultural operations have to be carried out in time. This is becoming extremely important in the green revolution areas where the timeliness of agricultural operations has become of crucial importance to be able to get two or three crops properly The big farmer has his own water and his own machines. He may not own a harvester but he can hire one He has no shortage of working capital. He can afford to keep permanent labourers also. So it is easy for him to carry out the various agricultural operations in time, while it is much more difficult for the small farmer who often has to depend on others for water, machinery, working capital and other inputs.

Marketing

As the small farmer is hard pressed for cash to meet postponed consumption needs and to pay off debts, he has to sell soon after the harvest-when the price is low. Sometimes due to indebtedness he may be forced to pledge his crop to the lender at a cheaper rate. The big farmer can afford to wait till the most favourable price is available in the market. When more than one outlets are available— as, for example, crushers and mills for sugarcane—the big, influential farmer may be able to sell the crop at the outlet where a higher price is available while, specially in the situation of a glut, the small farmer may be deprived of this outlet.

In some ways the loss of small farmer may be the gain of a big farmer. A small farmer's returns are low because he has to borrow working capital at a high interest rate. This translates into gain for a big farmer. Because he can lend other farmers' working capital requirements (or give them other loans) at a high rate of interest. Indebtedness may drive a farmer to sell a part of his land, but again, who benefits from it? It will most likely be one of the bigger farmers of the village who will purchase this land. Due to various differences in the opportunities available to them of access to inputs and machinery, credit, marketing and irrigation etc. the cost per acre and the cash receipts per acre for farmers may differ even within a single village depending on the size of their land holding, other resource base, influence etc

Cultivating costs

In a recent conversation with some farmers-cum-social workers of Rai block, in Sonepat district of Haryana, the author asked them the costs and returns from the wheat-and-paddy rotation (which is quite common in several green revolution areas of India) They said that such costs and returns differ significantly for poor (generally small and less influential) farmers and rich (generally big and influential) farmers. The rough calculation given by them for one acre of land was something like this

Cost of wheat on one acre of land (in Rs.)

Component	Poor Farmer	Rich Farmer
Seeds	125	125
Fertilisers	414	414
Pesticides	100	100
Irrigation (Elect tubewell)	200	50
Ploughing	350	100
Threshing	125	30
Marketing	60	15
Harvesting	250	250
Total	1624	1084

It is clear that the costs here differ mainly on account of the fact that the big farmer has his own tubewell and owns his own tractor while the small farmer has to buy his water and hire his machinery. Here objection may be raised that the big farmer's costs have been under estimated as the depreciation of machinery is not included. However, my informants said that this as well as loan instalments are made up by the practice of hiring out the machinery to others. Costs of irrigation for both would be much higher if diesel has to be used due to non-availability of electricity.

The costs of paddy cultivation were given roughly in the following way—

Cost of paddy on one acre of land (in Rs.)

Component	Poor farmer	Rich farmer
Seeds	250	100
Fertiliser	531	531
Pesticides	150	150
Transplantation	300	300
Irrigation (Elect tubewell)	1000	200
Ploughing	350	100
Threshing and harvesting	500	500
Marketing	100	25
Total	3181	1906

Adding up the two crops cultivating the wheat-paddy rotation per acre of land works out to roughly Rs. 4805 for a poor farmer and Rs. 2990 for a big farmer.

Saving per acre

What about the actual saving per acre of land. Let us first assume that the price per quintal obtained by the

poor as well as the rich is the same. Last year the average yield of wheat here was 16 quintals while the price commonly obtained by the farmer was Rs. 170 per quintal. In other words a farmer could get Rs. 2720 by selling wheat crop grown on one acre of land. Similarly by selling 28 quintals of paddy grown on one acre (average yield) he got (at the commonly prevailing price of Rs.250 per quintal) Rs. 7000. Thus on the basis of the commonly prevailing price a farmer could get Rs. 9720 by selling the wheat and paddy grown on one acre of land in one year. The saving of one small farmer, on the basis of these calculations works out to Rs. 1096 (2720-1624) for wheat and Rs. 3819 (7000-3181) for paddy, a total saving of Rs. 4915 per acre.

On the other hand the saving of the rich farmer works out to Rs. 1636 (2720-1084) for wheat and Rs. 5094 for paddy, a total of Rs. 6730 per acre of wheat-paddy rotation.

Thus a small farmer owning two acres of land may earn Rs 9830 in one year, while a big farmer owning 30 acres may earn Rs. 201900 in one year.

Small farmer at disadvantage

This however, is only a part of the story. The small farmer may have borrowed working capital from a private money lender at a higher interest rate so a big part of his saving goes away in meeting the heavy interest payment. On the other hand the big farmer may have his earnings further enhanced by the interest payment Further he may sell his crop at a much higher rate at a later date taking full advantage of the off-season price-hike. Due to this his earnings per quintal of grain would be much higher

The discussion so far has been mainly in the context of areas practising modern farming methods on an extensive scale. In several other areas, however, high productivity methods may be confined only to the bigger farmers while the bulk of the smaller farmers practise low-productivity agriculture under very adverse conditions. In several areas most small farmers work as sharecroppers of big landlords and have to give them a very big share of their crop

In many parts of the country the small farmers are unable to produce for even the subsistence needs of their own families. In other parts they produce enough food for their own families, but instead of retaining the food for year-round use they have to sell a large part of this crop to meet other more pressing needs or to clear debt. Later they have to buy grain in the market at a high price to meet their consumption needs. Millions of small farmers all over the country purchase a significant part of their staple food in the market. Thus these farmers may be actually harmed by a rise in the price of food in their role as buyers of this food, while in their role as sellers they may not always fully benefit from the price rise due to indebtedness etc They have to sell their produce through traders or traders-cum-big farmers.

Ask yourself

Big farmers seek to mobilise small farmers against various injustices of the Government, but they do not want to be asked whether they themselves give a fair deal to small famers while selling them water, giving them loans, entering into land leasing arrangements with them and whether they will be willing to accept equalitarian change within the countryside which will give a better deal to the small and landless peasants.

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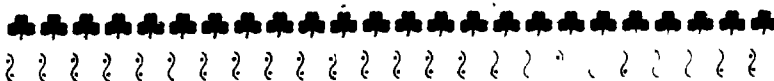
$ 20 million UN AID to India to check drug abuse

United Nations Fund for Drug Abuse Control (UNFDAC) extend assistance to the tune of $ 20 million to India for drug abuse control and for preventing of illicit drug trafficking. An Agreement to this effect was signed in New Delhi recently by Mr. Gamil M Hamdy, Resident Representative, UNDP on behalf of UNFDAC and Shri Kamalesh Sharma, Joint Secretary in the Ministry of Finance.

The first agreement pertains to strengthening of Law Enforcement Measures Against Illicit Drug Trafficking. UNFADC contribution to the project would be $ 7.5 million UNFDAC assistance would be utilised in India for establishment of additional operational enforcement units and strengthening of existing ones, development of rapid system of communication for the enforcement machinery, upgrading of investigation facilities as well as intelligence collection and dissemination, improvement of drug law enforcement techniques and upgrading of expertise in narcotics laboratory techniques and strengthening of narcotic laboratories UNFDAC would provide services of 70 man-months of consultancy, training of Government personnel and equipment worth $ 5.0 million.

The second agreement pertains to Development of Drug Abuse Prevention, Treatment, Rehabiliation and Control measures. The project would be sub-divided into five projects. These are strengthening of Narcotic and Forensic Laboratories, Monitoring of ilicit Opium Production, Drug Abuse Preventive Eduction, Drug Dependence Prevention and Treatment and Rehabilitation and Social Reintegration of ex-drug Addicts The total UNFDAC assistance to the five sub-projects would be $ 12.5 million which would be utilised for obtaining the services of consultants, training of Government personnel and acquisition of critical equipments for the sub-projects. □□□

Role of irrigation in agriculture in Andhra Pradesh

Dr. K. Narasinhulu & A. Rama Mohan Reddy

The authors here discuss with necessary data the major role that irrigation plays in the agricultural economy of Andhra Pradesh. They review the irrigation development that has taken place so far in the State through major, medium and minor schemes with particular reference to the progress made during the Sixth Five Year Plan. They also touch upon the schemes that are targeted to be taken up and completed during the Seventh Plan. Highlighting the priorities that the State Government has fixed in the irrigation sector, they suggest various measures that are needed to save irrigation water from being wasted to ensure its fuller utilisation.

NOBODY CAN DENY THE IMPORTANCE of irrigation facilities in an agricultural country like India. Farming totally dependent upon rainfall can succeed if rains are regular and sufficient. But since rainfall is a factor uncontrolled and unregulated by human hand, agriculture becomes a gamble. In a country like India, the problem becomes of utmost importance since a major portion of the national income is being derived from agriculture. Failure in that sector means a disastrous failure for the economy leading to an all-round disruption. Purchasing power in the agricultural sector goes down, so does the supply of food, cash crops and raw materials. The industries suffer because of lack of demand and scarcity of materials. Balance of payments undergo extra strains because of need to import everything And nothing can be done immediately, to boost up agricultural produce. If unfortunately failure of crops is repeated, a total breakdown of the economy is spelt

The question arises of safeguarding against the uncertainty of rainfall. In India, especially, most of rainfall takes place during monsoon season. About 80 per cent of annual rainfall is received during four months and the remaining 20 per cent during the winter If for certain reasons, monsoons are too early or too late or it is too little, or too much, then the whole agricultural sector is put in a tight corner. To insure against the risks of much vagaries of rainfall irrigation has to be provided through systematic means. Total rainfall during the year has to be stored up and its utilisation regularised Conventional and recognised means of irrigation that could be developed in India (and that have been developed) are tanks, wells and canals. Each of these means has its own role and uses in various regions of the country and it is well advised to develop those types of irrigation in a region for which it is most suited. It is only by developing assumed and regular irrigation facilities that we can protect our countryside from economic disasters, that we can really develop our agriculture which is the backbone of our economy by developing our agricultural productivity.

Importance of irrigation

The problem of Indian agriculture is mainly a problem of water supply. Land will not yield good crops unless it is given a plentiful supply of water. This is

specially true in India. Soil in India is comparatively dry. Rainfall is uncertain as also unequal in distribution. Irrigation is therefore, of tremendous importance in this country.

"Indian budget is a gamble of rains. If the monsoon fails, there is lockout in agricultural industry" remarked Wolff. Sir Charles Trivelyan says, "Irrigation is everything in India; water is even more valuable than land, because when water is applied to land it increases its productivity atleast six-fold and generally great deal more; and it renders a great extent of land productive." These remarks bring out the importance of irrigation in the country.

Need for irrigation

The need for irrigation arises on account of the following facts:

1. India is mainly an agricultural country. Agriculture requires an assured supply of water but the country has to depend mostly upon rainfall. Rainfall in India is highly uncertain. This uncertainty of the rainfall has catastrophic consequences for the country. To impart stability to agriculture, therefore, irrigation is indispensable.
2. There are some parts of India such as Rajasthan and South-East Punjab etc. Which are very deficient in rainfall. Certain parts of Deccan also are constantly exposed to drought. These areas cannot be cultivated except by means of artificial irrigation.
3. Crops like rice, sugarcane, jute etc. require regular and sufficient water supply. This is possible only under irrigation.
4. Winter crops cannnot be raised without irrigation as there is no winter rainfall except on the South-East coast of the Deccan.
5. Irrigation works also provide protection against the occurence of famines. Intensive cultivation, which is so very essential for increasing food supply is not possible without irrigation.
6. Finally irrigation will promote the all-round economic prosperity of the country. It will promote the agricultural development of the country which must lead to the development of trade and industries. This in turn, will increase employment opportunities in the country.

Irrigation development

As the State of Andhra Pradesh is predominantly agricultural one, due importance was given for increasing the irrigation potential and its utilisation in the State. Out of the total plan expenditure of Rs. 6465 crores in the State during 1951-52 to 1984-85 as much as Rs. 1747 crores accounting for 27 per cent of the total expenditure was incurred on multipurpose, major and medium irrigation projects. The multipurpose project Nagarjunasagar, which is one of the biggest dams in the world was taken up during 1955-56. The ultimate irrigation potential of this project is estimated at 8.30 lakh hectares, Apart from the multipurpose project like Nagarjunasagar, a number of major and mediu and minor irrigation projects were undertaken.

As a result, the net area irrigated increased fro 27.47 lakh hectares in 1955-56 to 29.09 lakh hectare by 1960-61 and 31.58 lakh hectares in 1964-65. Thi has however, declined to 27.18 lakh hectares in 1968 69, but increased to 36.55 lakh hectares in 1978-79 Though this decreased to 32.15 lakh hectares in 1979 80, it increased to 34.62 lakh hectares in 1980-81 and t 38.77 lakh hectares in 1983-84 which was the highe level recorded during this period. The gross are irrigated in the State also revealed a continuou increasing trend during the period 1956-57 (33.88 lak hectares) to 1983-84 (50.57 lakh hectares). The mo impressive and consistent increase was found unde wells where the area irrigated increased from 2.34 lak hectares in 1955-56 to 9.94 lakh hectares by 1983-84 There was clear evidence of intensive irrigate cropping. Area irrigated more than once increased fro 4.53 lakh hectares in 1955-56 to 11.80 lakh hectares b 1983-84. The gross area irrigated as a percentage t gross cropped area increased from 26 per cent in 1955 56 to 38 per cent by 1983-84.

Major and medium irrigation

The methods of irrigation used in Andhra Prades can be broadly classified into major, medium and mino irrigation schemes. Irrigation projects having cultivable Command Area (CCA) of more than 10,000 hectares each are classified as major projects. Thos having a CCA between 2000 hectares and 10,000 hectares fall under the category of medium irrigatio projects. For the purpose of analysis, the major an medium irrigation projects are generally groupe together. These projects comprise a network of dams bunds, canals and other such schemes. These project require substantial financial outlay and are therefore constructed by the government or any other agenc which may draw financial assistance from the govern ment and financial institutions.

Andhra Pradesh State has considerable wate resources. Two of the major rivers of India, i.e., th Krishna and Godavari flow through it. Besides thes two, there are 38 minor and medium river basins Important among these are the Vamsadhara, Nagavali Gundlakamma, Munneru and Pennar river basins. Th rivers contribute about 1.8 lakh mcm. of wate amounting to about 11 per cent of the total flow in all th Indian rivers excluding the Brahmaputra. As estimate by the 2nd Irrigation Commission (1972) about 50 pe cent of this water only was being utilised (of which abou one third was in Andhra Pradesh and the balance yet t be tapped).

Till towards the close of the first half of the 19t century, irrigation in the areas which now form Andhr Pradesh, was through large number of wells and tanks The construction by Sir Arthur Cotton of the Godava and Krishna anicuts in 1850's heralded a new era o large scale irrigation development. The anicuts an

ıls built during this period were all run of the river ımes and did not involve any large scale impounding ver waters behind storage dams. According to the ;ation Commission Report (1972), the net area ated in Andhra Pradesh was 23.18 lakh hectares at beginning of the First Five Year Plan (1951).

ı view of the importance of the agricultural sector to economy of the State and the availability of very e water resources yet to be tapped, high priority has n given in all the plans in Andhra Pradesh to əlpment of irrigation. The following table indicates amounts spent in different plan periods under ;ation sectors.

he plan effort of Andhra Pradesh has been so far ɜd on a strategy which has laid emphasis on building the basic infrastructure both for agriculture and ıstrial development viz. development of irrigation power.

ıd	State's total outlay (Rs in crores)	Amount spent under irriga-tion sector (Rs in crores)	% of irrigation sector to total plan outlay
Five Year Plan 1-56)	107 00	21 86	20 4
ınd Five Year (1956-61)	100 00	57 44	31 8
d Five Year (1961-66)	344.78	93 02	27.0
ıe Annual Plans 6-69)	235.62	59 36	25 2
·th Five Year (1969-74)	425 51	98 55	23 2
ı Five Year Plan 4-78)	1004 23	284 89	28 4
Annual Plans 8-80)	896.43	270 65	30 0
ı Five Year Plan 0-85)	3243 59	714 17	22 02

·ce Government of Andhra Pradesh, Five Year Plans

Progress in sixth plan

)uring the Sixth Plan period (1980-85), an outlay of 788.29 crores had been fixed for the irrigation tor with a target to create an additional irrigation ential of 495.272 T.Ha. Against the above, the ıenditure during the Sixth Plan period was about Rs. ..17 crores and the achievement is 367.91 T.Ha as ən below.

)ut of the above outlay, an amount of Rs. 30.10 res was set apart for the Medium Irrigation Projects ler Tribal Sub-Plan against which the expenditure is 18.65 crores.

)uring the Sixth Plan period, new irrigation projects , Telugu Ganga, Srisailam Right Bank Canal, ɜailam Left Bank Canal and Jurala projects were en up for execution Though new medium irrigation jects had been included in the Sixth Plan only two emes namely Andhra Reservoir Scheme and

Sl No	Name of the project	Financial (Rs. in crores)		Physical ('000 ha)	
		Outlay	Expen-diture	Target	Achieve-ment
1	Nagarjuna Sagar Project	173.00	184.70	215.85	194 105
2.	Sriramsagar Project Stage I and Stage II	164.00	197 62	157.00	99.280
3	Sir Arthur Cotton Barrage Project	18 68	22 21	stabilisation	
4	Srisailam Right Bank Canal	—	8 73	—	—
5	Srisailam Left Bank Canal	25 00	2 71	—	—
6	Telugu Ganga Project	20 00	51.79	—	—
7	Somasila Project	46 63	39 69	2 00	—
8	Yeluru Reservoir Project	55 00	44 62	—	—
9	Other major & medium irrigation schemes including water development	285.98	180 07	120 42	74 532

Source "Seventh Plan of Andhra Pradesh" 1985-1990, Govt of A P, Hyderabad, p 192, 1986

Buggavanka Reservoirs Scheme were taken up for execution.

There is a lag between the potential created and utilised and concerted effort is being made to bridge the gap. Further in order to modern the old structures of the projects, the work of modernisation was taken up during the Sixth Plan period. Though meagre amounts were spent during this period, this scheme will yield good results during the subsequent five year plans.

Minor irrigation

The projects which have a CCA of less than 2000 hectares are classified as minor irrigation schemes. The minor irrigation projects comprise all ground water development schemes such as dug wells, private shallow tube wells, deep public tube wells, boring and deepening of dug wells, and small surface water development works such as storage tanks, lift irrigation projects or the ground water development schemes are essentially peoples programmes implemented primarily through individual and cooperative efforts with finances obtained mainly through institutional sources. As such these projects impose no burden on public authorities. These projects provide an instant and a reliable source of irrigation and do not cause such problems as water logging and salinity which are associated with the major projects. Being labour intensive, the minor irrigation projects offer substantial employment opportunities to the rural people. Since these projects have a wide geographical distribution, they are not concentrated in any specific region as is the case with the bigger irrigation projects, they help to reduce regional imbalances in agricultural output and thus assure a better income and living standards to rural people over a wider area.

Andhra Pradesh being an agricultural State, minor irrigation has an important role in the development of agriculture in rural and backward areas. It has the advantage of smaller capital outlays and shorter gestation periods and easier mobilisation of local labour. The benefits of irrigation are extended to nook and corner of the State covering rural, tribal and drought prone areas.

Minor irrigation is looked after by three departments i.e., Irrigation Department, Panchayat Raj Department and Ground Water Department and mostly the Minor Irrigation sources are tanks. Lift irrigation which also comes under minor irrigation is being dealt by the Andhra Pradesh State Irrigation Development Corporation.

The minor irrigation under Irrigation Department consists of exploitation of surface water by construction of new storage reservoirs, weirt and diversion works and restoration of tanks and channels to P.W.D. standards, percolation tanks for improving recharging ground water supplies.

The total amount spent on minor irrigation and the potential created is shown in the following table.

Plans		*Expenditure (Rs in lakhs)*	*Potential created in hectares)*
First Plan	(1951-56)	352 00	2549
Second Plan	(1956-61)	438 32	1621
Third Plan	(1961-66)	1830 33	4977
Annual Plan	(1966-67)	522 72	0846
Annual Plan	(1967-68)	274 18	0684
Annual Plan	(1968-69)	283 92	2194
Fourth Plan	(1969-74)	1815 25	6305
Fifth Plan	(1974-78)	3881.92	9168
Annual Plan	(1978-79)	1549 23	3163
Annual Plan	(1979-80)	829 71	2529
Total		*11777 58* *117 78 Crores*	*34036*

Source Seventh Five Year Plan, 1985-90, Andhra Pradesh, Finance & Planning Department, Government of A P, Hyderabad, Vol II, p 216, 1986

From the table, it is very clear that the expenditure on minor irrigation slightly increased since the Fifth Five Year Plan onwards.

During the Sixth Five Year Plan period, Rs. 50.00 crores was allotted to P.W.D. Minor irrigation works to create an additional irrigation potential of 67,500 hectares, besides stabilisation of 7, 500 hectares. An expenditure of Rs. 50.73 crores was incurred during 1980-85 including funds given to District Plan Boards. The irrigation potential created during the Sixth Plan period is 82.51 thousand hectares.

Due to the efforts taken by the Government in development of major, medium and minor irrigation schemes, the total agricultural production, per acre yield of all crops, the net area irrigated, the irrigation facilities under different sources, have been enormously increased from 1951-52 to 1984-85.

The proposals for the development of irrigation facilities in Andhra Pradesh State during the Seventh Plan period are discussed below

Major & medium irrigation in VII plan

The approach to the Seventh Plan at the State level should broadly conform to the objectives setforth in the National Seventh Five Year Plan. The general guidelines issued by the Planning Commission to the State for the formulation of Seventh Five Year Plan are:

(1) Completion of ongoing projects started prior to First April 1974;

(2) Provision of full outlays with probable escalation for medium projects undertaken upto the end of the Sixth Plan;

(3) Acceleration or completion of major projects of Fifth Plan and Annual Plans 1978-80 during the Seventh Plan period;

(4) Adequate provision of outlays to fulfil World Bank commitments;

(5) Provision of outlays based on actual requirements for construction of water courses and field channels upto 5/8 hectares blocks where these have not been constructed;

(6) Provision of adequate funds for strengthening of investigation and design agencies, as necessary during the Seventh Plan period;

(7) Identification of areas of research and provision of sufficient outlays;

(8) Provision of continuation of projects taken up during the Sixth Plan period commensurate with the overall resources position;

(9) Provision for unavoidable new projects;

(10) Provision of necessary funds for modernisation of schemes after conducting diagnostic study.

The national objectives mentioned above have been kept in view while formulating the programmes for the State for the Seventh Five Year Plan by the Working Group constituted at State level. The irrigation sector of the Seventh Plan in Andhra Pradesh State has reflected the following priorities:

(1) Priority has been given to schemes undertaken during the earlier plan periods, thus ensuring their early completion without delay with particular reference to creation of irrigation potential.

(2) Utmost restraint has been shown in starting new projects. New schemes are generally selected where irrigation is at present low and in areas which are drought-prone and lie in tribal areas etc.,

(3) S.R.B.C. and Sriramsagar projects are under the pipeline for external aid and as such sufficient funds are allotted in the Seventh Plan;

(4) Telugu Ganga project is given special treatment as it is a time bound programme to enable supply of drinking water to Tamil Nadu,

(5) Special care has also been given to projects like

Nagarjunasagar, Yeleru Reservoir, Singur, Jurala and Somasila;

(6) The need for conjuctive use of all sources of irrigation has been emphasised, besides encompassing the other integrated aspects such as cropping pattern, recharge of ground water, watershed management, etc.,

(7) There is need to identify the problems of old irrigation schemes with their requirements of urgent renewal. This has to be undertaken through remodelling and modernisation programme. This aspect has a particular relevance to the structures in the existing Krishna and Godavari and Pennar Deltas and K.C. canal and Nizamsagar systems. Necessary diagnostic studies are being initiated;

(8) Adequate attention is required for research and development in irrigation evaluation of the construction techniques for difficult works such as deep cuts is necessary for evolving cost effective methodology consistent with full employment of labour;

(9) Laboratory facilities available for testing the soils and conducting hydraulic model experiments will be strengthened among other things, by opening regional laboratories;

(10) There is need to strengthen the Irrigation Department particularly in the field of geological exploration such as core drilling, which is essential for project preparation;

(11) Inservice training of the staff, educational tours to various projects in the country as well as abroad and incentives are necessary for updating the skills and better performance of the technical personnel;

(12) The utilisation of existing irrigation potential is to receive the highest priority through construction of field channels and quick completion of ongoing projects;

(13) Modernisation of irrigation systems would also receive immediate attention.

Keeping in view the objectives set forth in the National Seventh Plan and the approach to the plan at the State level, an outlay of Rs. 1635 crores for Seventh Plan (1985-90) and Rs.255.57 crores for Annual Plan (1985-86) have been proposed for the fulfilment of the various objectives.

The details of allocations made for each scheme and additional irrigation potential likely to be created under various schemes are as follows:

Sl. No	Name of the Scheme	Provision: Seventh Plan (1985-90) (Rs. in crores)	Annual Plan (1985-86)	Anticipated Addl. potential: 1985-90 ('000 has)	1985-86
1	Nagarjunasagar Project	125.00	30 00	110 00	24.00
2.	Sriramsagar Project	350.00	40.00	186.00	30 00
3.	Srisailam Right Bank Canal	200.00	20.00	15.00	—
4	Srisailam Left Bank Canal	75.00	15 00	—	—
5.	(i) Telugu Ganga Project	400.00	75.00	100.00	—
	(ii) Somasila Project	80 00	8 00	44 24	—
6	Godavari Barage Project	14 83	3.00	—	—
7.	Yeluru Reservoir Project	103 00	10.50	—	—
8.	Other Major Irrigation Projects	110.57	28.13	24.00	1.00
9	Medium Irrigation Projects	128.00	20 51	79 43	4 25
10	Miscellaneous Items such as Investigation, Research, Evaluation Planning Designs, Training etc	33.00	5 43	—	—
11	Completed major and medium schemes	16.00	—	—	—
	Total	*1635 00*	*255 57*	*558 67*	*59 25*

Source Seventh Five Year Plan, 1985-90, Govt. of A P., Hyderabad, p 194, 1986.

In addition to the major schemes mentioned above at items 1 to 7, other important major schemes under execution during 1985-86 are Singur Project, Vamsadhara Project Stage I and Stage II, T.B.P.H.L.C. Stage II and improvements to Nizamsagar and Jurala projects. Four new major schemes viz., Polavaram Barrage, Ichampalli Project, Bheema Project, Pulichintala Project are also proposed to be taken up during 1985-86 and token provisions are made for these schemes for carrying out detailed investigation including infrastructure facilities like inspection sheds, approach roads, etc.

Besides the major projects mentioned above, there are ten spill over medium projects taken up prior to the Fifth Plan and 22 ongoing medium projects of the Fifth Plan for which provisions are made during 1985-86. Some of these schemes are under advanced stage of completion. There are 13 new schemes (7 other than tribal and 6 under tribal) which are also included in the Annual Plan 1985-86.Of the above only one scheme i.e Andhra Reservior across Champavathi has been cleared by the Planning Commission and administratively approved by the State Government. Provisions are also made towards Research and Planning, Designs and Investigation of projects and miscellaneous items like Inservice Training, Monotoring Cell, Modernisation Cell, stipends to trainees etc.

Minor irrigation in seventh plan

In order to ensure that the benefits are spread over equitably, returns are avilable rapidly and backward areas are enabled to derive maximum advantage, highest priority is being accorded to Minor Irrigation Sector. A huge step up in the outlay for this sector is envisaged in the Seventh Plan.

Keeping in view the need to complete the large number of all spill-over works and possible scope of external assistance, about half of the allocation for Minor Irrigation is proposed under Chief Engineer (P.W.D.).

It is also proposed to make adequate provision for the Irrigation Development Corporation to ensure that institutional finances are attracted to the maximum.

In regard to Chief Engineer (Panchayat Raj) emphasis will be on the need to mobilise local resources taking into account the finances that may be available under Rural Development Programmes for irrigation works. Necessary strenghening of the Ground Water Department is also envisaged.

A separate project with E.E. assistance to develop minor irrigation (surface) in tribal and drought affected areas is contemplated.

An outlay of Rs. 200 crores has been provided for Minor Irrigation Programmes in Seventh Plan as detailed below:

		Rs. crores
Chief Engineer, P.W.D.	:	100.00
A.P.S.I.D.C. Limited	:	85.00
Ground Water Department	:	10.00
Panchayat Raj Department	:	5.00
Total	:	200.00

It is regretable to note that inspite of huge irrigation requirements of the State and inspite of its vast usefulness and indispensability, irrigation facilities have been allowed to go waste. Furthermore, these irrigational facilities have not been adequately followed by other agricultural efforts. The main category of causes for this sate of affair appears to be the lack of coordination between general administrative and developmental activities and inefficiency resulting in unimaginative rules, procedures and delays. The distribution of water is not regulated in reverse proportion to rainfall in an area so that when it rains, and water supply is not in demand water is supplied; and when it does not rain, there is water scarcity. Further it is to be noted that the farmer needs water not for its own sake, he needs it for irrigating fields and crops. So, he needs water at appropriate timings of sowing and during crop growth and he would be able to use water only if he is able to get seeds, manures and other necessary inputs in time and at reasonable rates. Administrative procedures are such that the farmer normally finds availability of loans etc. behind schedule. Again the farmers are seldom told in advance about the coming facility Quite often water reaches the small distributaries before this preparatory work of receiving water is completed. In still other cases, the farmers have rightly or wrongly many misgivings about the water rates, which they resent. They have to be educated about the advi of using water for their crops in terms of a chea augmenting output by 50 to 100 per cent. They be advised about the profitability of cash crops normally require a more assured supply of wat

Another aspect of under-utilisation of irr facilities is the loss of water in conveyance and th which may be upto 50 per cent of the total sup injurious to the areas through which canals pass, form of water logging etc. It is as important to sa wastage as it is to provide more water.

A number of steps have to be taken to save irri water from wastage and ensure its fuller utili Some of the measures that need to be adopted follows:

(i) It is necessary to provide liming all alo distribution system. This will reduce t through seepage to the minimum a problem of waterlogging will also be post
(ii) It would be the proper education of the regarding timing, amount and freque watering of various crops-so that the fa himself eager to make use of the availabl supplies.
(iii) The supply of water has to be co-ordinat the requirements of water. Its supply vary intensely with the rainfall and indirect proportion of the water require by the farmers.
(iv) All administrative red-tapism has dispensed with as unnecessary. The requirements of the farmers regarding finance, manures etc. have to be met time.
(v) The farmers should be provided with te advice and help regarding the levelling lands, digging of the field channels, that their capacity to receive and utilise increases.
(vi) Distribution should not become a ca dispute between different farmers leadi wastage of water and efforts. A coord scheme of water distribution schedule m prepared and the task of enforcement responsibility of the body of beneficiar
(vii) Extensive soil and land surveys sho undertaken and steps should be taken t soil for alkaline and other defects. This increase the area capable of receiving irri water.
(viii) The irrigation works must not suffer for repairs.
(ix) And lastly, water rates must be reas Increased production in the economy sh by itself good return for the investm irrigation projects by the State. A wealt healthy economy should be better able t the investment costs than one which resources go waste for commercial con tions. ☐☐☐

Investment lacked pragmatism during Sixth Plan !

M.R. Kulkarni & Sateesh Kulkarni

Here, an attempt has been made to appraise the investment performance during the Sixth Five Year Plan. The authors point out that the total investment in the economy in the Sixth Plan fell short of the Plan target by 7 per cent. They have highlighted the fact that there should be no comparison between CSO estimates and plan estimates, as it can be misleading. Rather we should compare the estimated actuals of plan investment with the plan intentions to evaluate the plan performance. Apart from this, there is an urgent need to forge a proper link between the plan and the National Accounts Statistics (NAS) to facilitate the task of monitoring the progress of the Plan, in their opinion.

THE PLANNING COMMISSION HAS completed ie mid-term appraisal of the Seventh Five Year Plan 985-90). But the data base for the mid-term appraisal extremely weak. The Central Statistics Organisation CSO) has made available the Quick Estimates of ational Income and related parmeters for 1985-86. he detailed National Accounts Statistics (NAS) re available only upto 1984-85. While estimates of public ector outlay are available for the first two years of the eventh Plan, the estimates of capital formation for the rivate sector are available from the NAS only up to the nd of the Sixth Plan period, i.e 1984-85 At this stage, is therefore possible only to appraise the investment erformance in the economy into 1984-85. It is ierefore proposed to make an assessment of such erformance during the Sixth Plan period with a view to nderstanding the kind of backdrop against which the erformance of the Seventh Plan to date has to be iewed.

The CSO's National Accounts Statistics make vailable three sets of data on Gross Domestic Capital ormation:

(i) Estimates at the aggregate level at current and at 1970-71 prices by industry of use.
(ii) Similar estimates for the public sector, and
(iii) Similar estimates *derived* for the private sector.

Problems

Basically the use of NAS data to evaluate Plan erformance is beset with two problems. One is that the IAS sector classification does not match Plan heads. econd, there is apparently a difference in the concepts nd coverage even when the sectors broadly converge. he macro dimensions of the Plan comprising projection of GDP and savings and capital formation prepared by the Perspective Planning Division of the Planning Commission with the help of Input-Ouput tables are generally consistent with the concepts and coverage of NAS sectors. However, the rest of the Plan is drawn in terms of programmes and projects and Plan outlays with which the macro dimensions are neither integrated nor can they be easily integrated. The problem of evaluating the Plan in terms of sectoral investment would therefore persist even when NAS become available for the corresponding period Moreover, the NAS series are available at current prices and constant 1970-71 prices. Plan projections, on the other hand, are at the base year prices. For instance, the Sixth Plan estimates were at 1979-80 prices. Use of NAS for Plan appraisal would therefore require conversion of NAS estimates to the base year prices of the Plan, making use of the CSO's current and constant price series.

Another set of data available only for the public sector is the Plan outlays projected as well as actuals by Plan heads. The actuals or revised estimates of Plan outlay are available with the least time lag, i.e. about a year. There are two diffculties in making use of the Plan outlay data for evaluating the performance of the public sector First, data are at current prices and second, they relate to *outlay* and not investment or capital formation. Conceptually the Plan outlay in the public sector consists of two parts, viz. current outlay and investment. Traditionally the current outlay is not considered as capital formation and will have to be therefore excluded from Plan outlay.

Sectoral comparison

The Sixth Five Year Plan projected a total

investment of Rs. 158,710 crore at 1979-80 prices during the five years of the Plan. Of this, Rs. 84,000 crore was in the public sector and the balance Rs. 74,710 crore in the private sector. Table I taken from the Sixth Five Year Plan (Table 3.7 on page 38) gives the break-up of the total investment of Rs. 158,710 crore by 14 broad sectors which conform, with some variations, to NAS Sector classification. Table II taken from the Plan (table 3.8 on page 38) gives the distribution of private sector investment by five broad sectors. We have attempted regrouping of the 14 sectors given in Table I to match the sector classification given in Table II and have derived the public sector investment estimates by the aggregated sectors. The results are presented in Table III. Columns 3,5,& 7, give the Plan projections of investment—total, public sector and private sector respectively. The table also presents the corresponding estimates of CSO in the latest NAS (January, 1987). CSO estimates have been converted to 1979-80 prices by making use of the current price series and constant (1970-71) price series.

CSO's estimates of total investment (gross capital formation) at Rs. 146, 928 crore during the Sixth Plan indicates a shortfall of 7.4 per cent. The shortfall is much higher in the public sector at 18.3 per cent. CSO's estimates of capital formation in the public sector is Rs. 68, 615 crore as against the Plan target of Rs. 84,000 crore. On the other hand, the estimated investment in the private sector was Rs. 78,313 crore which exceeded the Plan projection of Rs. 74,710 crore by about 5 per cent.

Wide variations

The sectoral comparison between Plan projections and CSO estimates appears to be vitiated by differences in concepts, coverage and methodology. This seems to be particularly so as between the public sector and the private sector estimates in respect of agriculture and allied sectors (excluding Mining and Quarrying) in particular. This factor can alone explain the wide variations in the two sets of estimates for this sector The Plan projected an investment of Rs. 33,468 crore in Agriculture and Allied Sectors. The corresponding CSO estimate is Rs. 26,476 crore The difference may be explained by the shortfall in actual investment. However, it is difficult to reconcile the estimates of public sector investment in this sector. The Plan projected an investment of Rs. 17,367 crore whereas CSO has estimated an investment of only Rs. 7475 crore. Such a large difference cannot possibly be ascribed to shortfall alone. The private sector investment according to CSO was higher by handsome 20 per cent than the Plan projection. A possible explanation is the transfer of Plan funds provided in the public sector resulting in capital formation in the private sector which gets reflected in CSO estimate of private capital formation. In Industry and Minerals the CSO estimate shows fulfilment of the public sector but a shortfall to the extent of about 20 per cent in the private sector There was also a substantial shortfall in Power sector where the investment is estimated at Rs. 15,603 crore as against the Plan intention of Rs. 23,365 crore Under Railways the Plan outlay was Rs. 5100 crore but the investment shown was only Rs. 4724 crore Since almost all the outlay under Railways is of the nature of investment, the difference may possibly be explained by CSO's approach of reckoning the workshops and production units of Railways in the manufacturing sector. In other sectors, which are even more difficult to closely identify and match, the variations are even larger. It would thus appear that the comparison between Plan projections and CSO estimates as a tool for Plan appraisal is relevant, at best, at only the aggregate economy level.

Shortfall in investment

In the public sector the Sixth Plan provided for an outlay of Rs. 97500 crore of which Rs. 84,000 crore was the investment component. The sectoral distribution of the Plan outlay can be seen in Column 3 of table IV. In this table we have attempted estimation of Plan outlays at Constant 1979-80 prices from year to year of the Plan. The current price outlays of actual expenditure available in the Economic Survey 1986-87 (table 2.5, page S. 32) have been converted to Constant prices using the implicit respective sector deflaters of NAS gross capital formation series. It can be seen that as against the Plan outlay of Rs. 97,500 crore the estimated actual is Rs. 74,488 crore indicating a shortfall of about 24 per cent. It is, however, essential to estimate public sector investment *Net* of current outlay. The difference between the Plan outlay of Rs. 97,500 crore and the Plan investment in the public sector of Rs. 84,000 crore constitutes the current outlay. This is about 14 per cent of the Plan outlay. Since the Fifth Five Year Plan the practice of estimating break-up between outlay and investment by Plan heads has been discontinued. The earlier Plans did provide such a break-up and it may be reasonably assumed that the proportions have not undergone any significant change subsequently. Table V presents the estimated Plan expenditure and the corresponding investment at 1979-80 prices on the basis of the assumed ratio between Plan outlay and investment for various sectors. It will be observed that the total investment in the public sector in the Sixth Plan amounts to Rs. 64,119 crore as compared with the Plan projection of Rs. 84,000 crore. This is a shortfall of about 24 per cent.

Finally table VI brings together the Plan projections of public sector investment, the CSO estimates and the investment estimates derived from the adjustment of current outlay in total Plan outlay. Both the CSO estimates and our estimates of public sector investment in the Plan indicate a shortfall. It was over 18 per cent according to CSO, whereas our estimate indicates a shortall of 24 per cent. Either way the failure of the Plan to achieve the target of investment in the public sector must be considered serious. As already observed, the comparison between CSO estimates and Plan estimates would be misleading. However, it is instructive to compare the estimated actuals of plan investment

Table I

Gross Investment by Destination Sectors and Increment in Gross Domestic Product (GDP) at Factor Cost (1980—85)

(Rs. crores at 1979-80 prices)

Sl. No.	Sector	Investment (at market prices)	Incremental GDP (at factor cost)
(0)	(1)	(2)	(3)
1	Agriculture	32242	6404
2	Forestry and Logging	478	327
3	Fishing	748	318
4	Mining and Quarrying	6575	1040
5	Manufacturing	45515	6500
6	Construction	1760	1389
7	Electricity, Gas and Water Supply	23554	686
8	Railways	4724	420
9	Other Transport	11330	1025
10	Communications	2902	262
11	Trade, Storage and Ware Housing	7299	5026
12	Banking and Insurance	260	968
13	Real Estate and Ownership of Dwellings	16437	923
14	Other Services (including Public Administration and Research)	4886	2711
15	Total at factor cost	..	27?99
16	Total at market prices	158710	37994

Table II

Distribution of Private Sector Investment 1980-85

(Rs crores at 1979-80 prices)

Sl. No.	Sector	Amount	Share(%)
(0)	(1)	(2)	(3)
1	Agriculture & Allied	16101	21.55
2	Industry & Minerals	30323	40.59
3	Power	189	0.25
4	Transport & Communications	3390	4.54
5	Others	24707	33.07
	TOTAL	74710	100.00

with the Plan intentions. In Agriculture and Allied Sectors the Plan projected an investment of Rs. 17,367 crore, while the actual investment was Rs. 14,272 crore. This amounts to a shortfall of 18 per cent. In the Industry & Minerals sector the actual investment was Rs. 19520 crore as compared with the Plan projection of Rs. 21,767 crore or a shortfall of 10 per cent. The most serious shortfall was in the Power sector where the relevant investment was only Rs. 13447 crore against the Plan level of Rs. 23366 crore . The CSO also does not put the figure above Rs. 15603 crore . In another core sector, Transport and Communications, realised investment is estimated to be Rs. 12,436 crore , a shortfall of Rs. 3000 crore . However, the performance in this sector will have to be interpreted somewhat cautiously. Railways fulfilled their investment Plan but there was a shortfall of over 20 per cent in communications. The Plan did not indicate the projected investment in 'Other Transport'. It could only be inferred that there was a substantial shortfall in this sector too.

Conclusions

To sum up:

(i) The total investment in the economy in the Sixth Plan fell short of the Plan target by about 7 per cent.

(ii) In the public sector the shortfall was as much as 18 per cent according to CSO and 24 per cent on the basis of our estimates; it was made up to some extent by over-fulfilment in the private sector.

(iii) There were serious shortfalls in the public sector in respect of Power and Transport, particularly Power.

(iv) Overall, there were also shortfalls in Agriculture and Allied sectors, Industry & Minerals and Transport and Communications.

(v) Chapter 3 of the Plan which presents the macro dimensions, remains suspended in the air in relation to the rest of the Plan. There is no effort to integrate it with the main body of the Plan. As a result the task of monitoring the progress of the Plan becomes extremely difficult, even impossible in certain respects. The Plan heads do not conform to NAS sectors and are largely governed by administrative and budgetary traditions. While this is understandable, there is need to forge a proper link between the Plan and the NAS. At the same time, it must be appreciated that certain policies and Plan programmes follow from certain socio-economic goals and objectives and are bound to remain so. But no matching flow of data has been generated to monitor the progress of such policies and programmes. For example, the policy regime for the large and medium industry, the small scale industry and the villages and cottage industry is different in keeping with different objectives in these sectors but the data base for monitoring the progress in them is extremely inadequate, even non-existent. These aspects of Plan formulation methodology and data base need to be urgently attended to. □□□

Table III

Gross domestic capital formation 1980-85 at 1979-80 prices

Rs. Crores

Sl.	Sector	Gross Capital Formation		G.D.C.F. in public Sector		G.D.C.F. in priv. sect	
		Plan Projection	C.S.O. Estimates	Plan Projection	C.S.O. Estimates	Plan Projection	C.S.O Estimates
1.	2.	3.	4.	5.	6.	7.	8.
1.	Agriculture & Allied	33468.00	26496.00	17367.00	7457.00	16101.00	19039.00
2.	Industries & Minerals	52090.00	46418.00	21767.00	22013.00	30323.00	24405.00
	2.1 Mining & Quarrying	6575.00	9364.00	N.A.	N.A.	N.A.	N.A.
	2.2 Manufacturing	45515.00	37054.00	N.A.	N.A.	N.A.	N.A.
3.	Electricity, Gas & Water Supply	23554.00	15419.00	23365 00	15603.00	189.00	(184.00)
4.	Transport & Communications	18956.00	24913.00	15566.00	10842.00	3390.00	14071.00
	4.1 Railways	4724.00	4055.00	4524.00	4055.00	—	—
	4.2 Other Transport, Trade & storage	11330.00	18744.00	7940.00*	4673.00	3390.00*	14071.00
	4.3. Communications	2902.00	2114.00	2902.00	2114.00	—	—
5.	Construction	1760.00	2410.00	=	672.00	=	1738.00
6	Others	28882 00	31272.00	5935.00	12028.00	24702.00	19244.00
	Totals	158710.00	146928.00	84000.00	68615.00	74710.00	78313.00

= Included under others.
* only 'Other Transports'
$ Trade & storage included in 'Others' in the Plan.

Table VI

Public sector gross domestic capital formation (1980-85) at 79-80 prices.

Rs. Crores

Sl. No	Sector	Gross Capital Formation		
		Plan Projection	C S O Estimates	Estimated Investment
1		2	3.	4.
1	Agriculture & Allied	17367.00	7457.00	14272.00
2.	Industries & Minerals	21767.00	22013.00	19520.00
	2 1 Mining & Quarrying	N.A.	N A.	
	2 2 Manufacturing	N.A	N A.	
3	Electricity, Gas & Water Supply	23365 00	15603.00	13447.00
4.	Transport & Communications	22865.00	10842 00	12430.00
	4.1 Railways	4724.00	4055.00	4714.00
	4.2 Other Transport	N.A	4673 00	5338.00
	4.3. Communications	2902.00	2114.00	2378.00
5.	Construction	=	672.00	
6.	Others	1364.00	12028.00	4450.00
Totals		84000.00	68615.00	64119.00

Table V

Public sector plan outlays 1980-85 (Estimated Acutals)

(Rs. Crores at 79-80 prices)

Sl. No.	Sector	Total Sixth Plan Outlay	Current Outlay %	Current Outlay	Investment
1	2.	3	4	5	6
1	Agriculture & Allied	16791.00	15.00	2519 00	14272.00
2.	Industries & Minerals	20333.00	4.00	813.00	19520.00
	2.1 Mining & Quarrying	8488.00	—	340.00	8148.00
	2.2 Manufacturing	11845.00	—	473.00	11372.00
3.	Electricity, Gas & Water Water Supply	13515.00	0 50	68.00	13447.00
4.	Transport & Communications	12581.00	1.20	151.00	12430.00
	4.1 Railways	4771.00	—	57.00	4714.00
	4.2 Other Transport	5403.00	—	65.00	5338.00
	4.3 Communications	2407.00	—	29.00	2378.00
5.	Others	11267.00	60.60	6817.00	4450.00
	Totals	74487.00	13.90	10368.00	64119.00

Table IV

Plan Outlays 1980-85

Rs. Crores at 79-80/Current prices.

Sl.	Sector	Sixth Plan Outlay 1980-85	Annual Plan 1980-81 Acutals		Annual Plan 1981-82 Actual		Annual Plan 1982-83 Actual		Annual Plan 1982-83 Actual		Annual Plan 1984-85 Actual		Total	
		1979-80	Current Prices	1979-80 Prices	Current Prices	1979-80 Prices	Current Prices	1979-80 Prices	Current Prices	1979-80 Prices	Current Prices	1979-80 Prices	Current Prices	1979-80 Prices
1.	2.	3.	4	5	6.	7.	8.	9.	10	11	12	13.	14	15.
1.	Agricultre & Allied	24698.80	4005.40	3531.90	4437.20	3342.40	4997.10	3154 10	5727 10	3234.90	6963.70	3527.80	26130.50	16791.10
2.	Minerals & Manufacturing	22187.60	3361.40	2898.90	4646.60	3535.00	5753 90	4097.20	7066.80	4615 00	8408.40	5187.40	29237.10	20333.50
	2.1 Mining & quarrying	7170.00	1166.90	1011.80	1963.70	1464.30	2718 60	1897.40	3185.40	2049.40	3467.00	2065.30	12501.60	8488.20
	2.2 Manufacturing	15017.60	2194.50	1887.10	2682.90	2070.70	3035 30	2199.80	3881.40	2565.60	4941.40	3122.10	16735.50	11845.30
3.	Electricity, Gas & Water Supply	19365.40	2661.10	2458.80	3196.20	2541.10	3731.00	2713 80	4126.20	2808.10	4747.20	2993.00	18461.70	13514.80
	2.1 Power	19265.40	2656.80	2454.20	3182.30	2530.10	3708 50	2697.50	4092.50	2785.20	4658.50	2937.00	18298.60	13404.00
	2.2 New & Renewal Sources of Energy	100.00	4.30	4.60	13 90	11.00	22 50	16.30	33 70	22.90	88.70	56.00	163.10	110.80
4.	Transport & Communications	15546.30	2519.70	2297.60	3159.20	2548.70	3427.60	2406.00	3940 30	2514.20	4631.10	2814.90	17677.90	12581.40
	4.1 Railways	5100.00	973.00	927.50	1210.00	1033.90	1319 50	933.80	1419 60	906.40	1664.60	969.20	6586.70	4770.80
	4.2. Other Transport	7312.00	1190.00	1041.60	1373 10	1055.90	1433 30	999.50	1656.20	1059.70	1969.10	1246.30	7621.70	5403.00
	4.3. Communications	3134.30	356.70	328.50	576 10	458 90	674.80	472.70	864 50	548.10	997 40	599.40	3469 50	2407.60
5.	Others	15701.90	2284.80	1998.50	2771 70	2066 00	3373 30	2106 10	4227 10	2434.50	5127.60	2662.30	17784.50	11267.40
	Totals	97500.00	14832.40	13185.70	18210 90	14033.20	21282 90	14477.20	25087.50	15606.70	29879.00	17185.40	109291.70	74488.20

YOU AND YOUR HEALTH

Geriatrics and homoeopathy

Dr. Kamal Kansal

The author here deals with the problem of ageing—Geriatrics, in medical terms—and its effective remedies offered by the Homoeopathic system of medicine. Citing examples from his own as well as others' experiences the author .speaks of different Homoeopathic medicines which have worked wonder and brought hope to those who are ageing.

GERIATRICS IS THE BRANCH of medical science that deals with old age and its problems. Curiously, the word 'Geriatrics' seems to resemble in sound the Sanskrit word 'Jara' meaning old age. Could one therefore hazard the guess that the word 'Geriatrics' seems to originate from the Sanskrit word 'Jara' ? In my view, such a conclusion does not seem to be far-fetched.

Ageing

What is ageing ? And what are its causes ? These are questions that have since long fascinated man as he alone of God's creations is gifted with the intelligence to grasp aging as an idea.

Nobody knows for sure why we age and die. We sprout, we blossom, and we wither. While the general format of this life history is the same for every one, significant differences in its style and length may occur. In other words, some of us put up a brave fight against the ravages of time and manage to retain youth and charm longer than others. Some people even at 90 throb with sexual virility: Oldest Bride and Bridegroom: "Dyura Auramovich, reportedly aged 101, married Yula Zuivich, admitting 95, in Belgrade, Yugoslavia in Nov.,1963. "(Guinness Book of World Records, 1985 Edit.). While others lose their potence in their sixties as a result of hardened arteries or enlarging prostate, such a state of affairs can be accounted for by a combination of genetic and environmental factors like Physical activity. Who would contest the point that strenuous physical activity keeps the heart, the lungs and the circulation in tone ? Psychological factors too play a role in this regard. People pulsating with optimism and buoyancy take old age by the horns and defeat it. Similarly, the life span in the case of married people is longer because they are not assailed by loneliness like the unmarried. Diet is another factor as thin and wiry people generally live longer than the pot-bellied. Obesity taxes the heart and circulation and promotes lethargy. Smoking especially the inhaling of cigarette smoke directly affects the length of life. It limits lung capacity and breeds such life-limiting diseases as lung cancer and heart ailments.

Some blessed humans accept old age without grumbling. They neither fret nor fume at being reduced to the status of mere spectators of the drama that life is. They readily reconcile themselves to the truth that they cannot go on playing the role of a lusty player indefinitely. To such people, old age is the time of reaping the benefits of their life-long experiences rather than an unwelcome affliction to be borne willy nilly. On the contrary, there are others who chafe at the yoke of old age having descended upon their shoulders. Such people turn their lives into an unrelieved torment. They do not apparently mellow as they still cry for a place, a status. No wonder they become rigid in their approach to life and wilt very soon.

Care of the elderly

A common cause of delay in attending to the needs of the old is that the elderly take deteriorations in health for granted and do not report. For many of the diseases afflicting the elderly, complete 'cure' is sometimes not possible, yet much can be prevented as well as cured with the help of Homoeopathy if applied in a correct way and at right time. some of the main problems. Faced by the elderly are as follows:

(i) *Mental depression & Failing* memory (2) *Deafness* (3) State of Anxiety (4) Cataract (5) Circulatory disorders (6) Urinary problems/enlarging Prostate (7) Pruritis (8) Arthritis (9) Stroke and (10) varicose Veins

Arthritis

It is perhaps the major physical problem for the elderly, and a common source of discomfort and incapacity. Degeneration or a fall or accident may be the precipitating cause.

Remedy suggested

Osteorathritis (Nosode) 200 once a week or fortnight is good in all such cases. Bryonia; when much pain on least movement, stiffness, especially of knees; better rest. Pain on first movement better by slow motion; *Rhus tox* often relieves morning stiffness. *Calc. Hypophos* much helpful in arthritis of the hands. *Guaicum. Ruta, Causticum, Hekla lava* and *Calc Flour* are others according to symptoms for help. *Calc. Flour 12x* should be used for long time; greatly relieves the pain and stiffness.

Cataract and eye troubles

Failing sight is inevitable; commonest cause is cataract; in early stages the process may be arrested and cured by the correct Homoeopathic approach, while neglected cases need surgery. *Calc. Flour* 12 x Four times daily with *Phosphorus 200* once a week or fortnight with external application of *Cineraria Maritima Eyedrops* has preventive as well as curative role. Glaucoma, Entropion (inward turning of eyelashes). For the former *Bell., Gels. Phos Spigelia* according to symptoms may be used while latter is often relieved by *Borax.*

CASE (I) Mrs. K. Kaur, widow 60 years, came with almost total failure of vision, a diagnosed case of cataract. She was put on Conium 200 one Dose, *Calc. Flour 12x* 3 times a day with *Cineraria eyedrops* twice daily in both eyes. The treatment was continued with astonishing improvement. In November 1980, after 7 months of regular treatment, she could see like a normal person. She is now 75 and living a normal life.

CASE (II) Mr. G. Singh 58, a tailor came with the problem of watering and irritation in eyes and photophobia after cateract operation. *Operation of eyes and for after effects Ledum 200* twice a day was prescribed and was continued for 6 weeks with Euphrasia eye drops for local application. After one week, patient showed improvement and watering became less, with no irritation and two weeks later photophobia was also removed. He can now see thanks Homoeopathy.

Deafancess and noises

Gradual deafness is due to degeneration. Homoeopathy helps to a great extent but some still require some hearing aid. *Phosphorus* is the most valuable remedy for elderly's hearing problems— in a room when there are several sounds present. *Salicylic acid* is useful in simple progressive deafness often associated with Meniere's disease. *Chinopodum* is for deafness to low tones and usually when auditory nerve is involved. For noises in ears (tinitus) which may be due to degeneration hypertension, meniere's disease, delusion or tumour: *China* when roaring, ringing or tinkling is felt in the ears is useful. *Baryta carb* is almost specific for deafness and tinitus with crackling noises. Whizzing and buzzing requires *Baryta mur. Kali Mur. Puls: Graphitis* are others, often helpful remedies according to indications.

Failing Memory

It is one of the more constant phenomena of old age. Patient can remember remote events but not the recent dates, placed things etc. *Baryta carb 200* one dose daily is good friend of such old people. *Anacardium:* if one Cannot remember the names of friends, *Glonoine:* forgets well known streets. *Kaliphos 6 x is a good nerve tonic for failing memory.*

Poor circulation

Due to arterioclerotic changes, coldness, bluness, chillblains, gangrene are slowly developing ailments. *Carbo Veg.* is one of the best remedies for blue, icecold, perspiring hands and feet. *Secale Cor* is for senile gangrene, Shrivled blue feet with much burning inside with relief with cold application. Warmth not tolerated. Extrimities are very mauve (Violet) or blue and less icy than with *C. Veg.*

Circulatory disorders

Many are the circulatory disorders: Some complain of oppression and squeezing of the heart—*Cactus* is generally indicated. Some complain of trembling, palpitation, irritable heart action—*Creatagus Q.* Calms the nerves and sustains the heart. —a great heart tonic. After menopause swelling of ankle is a common complaint Apis 3 x is the remedy with other symptoms like awkwardness, thirstlessness etc. *Lach.* for flushes, headaches; waking from deep undisturbed sleep, old lady has become suspicious and talkative. Escaping of urine on laughing or sneezing—*Caust. Sepia,* Due to poor circulation patient is liable to get cold limbs, blueness, gangrene, chillblains etc. Hypothermia may also occur—*carbo veg. Hamamelis, Agaricus* are important basic remedies stimulating healthy blood supply of hands and feet. Raised blood pressure puts extra load on heart and if untreated results in stroke or Cerebral haemorrhage. *Aconite, Glonoine, Heloderma* are of much help in this situation.

Mental symption

Depressive feelings quite often predominate, with a sense of loneliness and isolation; such feelings naturally occur after the loss of a close member of the family, a friend or neighbour, *Ignatia* is the remedy of choice for these problems of grief and mourning. With added problem of fear, lack of confidence —*Pulsatilla* or *Nat. Mur.* are indicated. *Sepia* for a woman who was of much caring instinct, has now no interest in family, has become careless and indifferent. Hypochondriacal fears about death, cancer or heart disease easily develop in the elderly *ACON, Acid Phos, Kali Phos.* aften help in fighting such fears. Demantia Senile; *Baryta carb* is for loss of memory, mental weakness, loss of confidence, and childish behaviour. Insomnia is a common problem, pain in joints, frequency of urination add to this problem. *Coffea, opium, Kali Carb,* usually cure insomnia.

Shingles

It is due to an infection of the peripheral nerves by the

chicken pox virus. For acute attack with much burning, blistering *Apis, Rhustorx: Ars.* are indicated; for remaining neuralgia afterwards *Mez. & Merc Sol.* are the best.

Stroke

Paralysis of parts of the body following cereberal tumour, Haemorrhage or thrombosis. *Arnica Montana* helps in absorbing the haemorrhage or thrombus. *Heloderma* with feeling of part being frozen cold. *Belladonna* with much flushing of face, throbbing carotids, headache and violence. *Aconite* in early stages with much fear and restlessness, and thirst. *Baryta Carb* with artericsolerosis and child like behaviour. *Opium* is useful to prevent a threatened attack. *Glonoinie* is useful for a threatened attack with headache and fullness of the heart.

CASE— My aunt, aged 63 years, had an attack of Hemiplegia on 13th Dec., 1984 (complete left side, including face). She was put on usual allopathic drugs. She was an old diabetic and was Hypertensive. She was in Aligarh. On being informed I could see her on the third day. She was without any improvement. She said that when she had the attack, the very first feeling she had was as if her whole left side of body was in ice. Extensive feeling of coldness in left side; hands and feet, as if, frozen. It immediately reminded me of this drug. which has the following prominent symptoms:

—Benumbing Paralysis
—Arctic Coldness of the parts involved
—Numbness
—Feels cold as in ice
—Craves constant heat and warmth.

Heloderma 200, three times daily, was given; all allopathic medicines were stopped. There was quick and remarkable imporvement, so much so that she attended my grandmother's funeral in Delhi just after 27 days of the attack. She is perfectly normal now, with normal muscular power in limbs. No deviation of mouth is left. She is also non-hypertensive and her blood sugar is normal (effect on sugar metabolism is yet to be ascertained). She is now taking the remedy on every alternate day. (Case published in Homoeopathic Prestige Vol. 1 June 1985 No. 7 Page 178 "Heloderma: A minor remedy of major importance".)

Pruritis senilis

At times it is mild but some times becomes tortuous, generally without eruptions, is due to atrophy of skin, lack of sweating etc. Dolichos often relieves nicely. *Fagopyrum, croton tig., Mez. Caladium* are oft indicated remedies.

Senile gengrene

The graver condition most frequently affects the great toe, is often cured astonishingly quickly by *secale cor 200* twice daily, which is the perfect simillimum many times.

CASE—Mr. Kapoor, aged 48 yrs. a person of great dynamic personality, a strong follower of Homoeopathy, a chronic smoker, diabetic, developed violent burning pain in both lower limbs more at rest after prolonged walking with cramps; legs shrivelled and became cold; yet he could not cover them (Raynaud's Phenomena). Got investigated in Safdarjang Hospital, Delhi and was diagnosed Burger's Disease in July, 1985, was admitted and advised Amputation of both legs below knee. On account of presentation *Secale Cor 200* was given to him for a few weeks with astonishing early response to the extent that we could save him from the ravages of the disease. Though he is still diabetic but controlled with oral hypoglycaemic therpy only, is otherwise fine and has resumed office.

Urinary difficulties

Yet another troublesome problem is loss of bladder control. Urine escapes involuntarily and the bladder feels full, not relieved by urination. *Gels. 200, Causticum 200, Equisitum Q* in frequent doses are of great advantage in most cases, *Rhus Aro Q* is also of much help, when associated with burning. Frequent nocturnal urination in the aged. *Baryta carb*— Nocturnal frequency with prostate enlargement. (This drug is said to be best for both extremes of life, i.e. for childhood and old age). HAEMATURIA *Ficus Rel: Q.* covers a wide variety of Heamaturia due to any cause. If due to cystitis try *Uva Uris., Thlaspi B Past., Thuja* in cases of bladder polypus. Prostate—Benign prostate hypertrophy is the commonest senile change. 'Sir Benjamin Brodie,' said *"When hair becomes grey and thin, when atheromatous deposits invade the arterial walls, when there has formed a white zone around the Cornea, at the same time, ordinarily, I dare say invariably-the prostate increases in volume"*—The Nocturnal frequency, hesitancy, dysuria, retention with over-flow or Haematuria are the common presenting symptoms of an enlarging prostate. *Increased libido initially and impotency later on comes as a rule* with enlarged prostate *lycopodium Sabal Sarr. Q.* is often curative. *Baryta Carb, conium* are other remedies according to symptoms. *SOLIDAGO VIR: Q.* often avoid need of catheterization in cases of Retention. *Thuja 200, Puls* are also helpful.

CASE: An old man 78 years admitted in the hospital for Retention of Urine. A known case of BHP. Since he was already catheterized 4 times this time surgeons told him that they will do prostetectomy. Afraid of operation, his son came to us for homoeopathic help. He was given *solidago Q 5* drops to be taken 3 to 4 times daily and wait till the day of surgery. This showed some improvement as. urine started with catheter. He got his father discharged from the hospital and continued the medicine for a month and reported that he was perfectly well and did not require any cathertization. He is now 88 years old feeling perfectly well, without any urinary problem.

Varicose veins

C. Veg. Puls, Fl. Acid. Lachesis: are some of the drugs *(Contd. on page 34)*

BOOK REVIEW

Design For Development Strategy For Integrated Area Development: Case Study of North Kanara District (Karnataka) by L.S. Bhat, Concept Publishing Company, New Delhi, 1987. Rs. 90/-

Bhat is a well known regional geographer. His work on preparing a regional plan for Karnal. district in Haryana is well recognised. The present work relating to North Kanara district is an extension of Bhat's work on micro level planning. This book of less than one hundred pages presents succintly the methodology of area development. The accent is on spatial ordering of activities relating to human settlements. The maps illustrate the theme neatly. Bhat has also presented cosiderable statistical data on spatial analysis. The table on population size and rank of settlements based on a composite score is of particular attention. Equally important is his table on regional characteristics in the composition of small scale industry in various sub-regions and talukas.

Micro level planning has to be based on the potential and exploitation of area's resources. Preparing a resource inventory is, therefore, a first requisite. At the micro level economic activities in their areal and locational setting serve to evaluate the backward and forward linkage of activities. 'The area comprising its physical resources and human settlements and their attributes need systematic analysis in terms of their spatial distribution, pattern of association and potential. 'Integrated area development lays stress on spatial integration of development activities. The present study is an attempt to highlight the spatial aspects of the strategy for integrated area development.

North Kanara district has an area of 10,291 sq. km and a population of 10,72,034 persons dwelling in 1283 rural settlements and 13 towns. Literacy is high at 57.35 per cent. Teak wood is important resource with nearly 81 per cent of the total area under forests. Paddy is an important crop. Population density is low at 104 persons per sq. km. Urban population is 25 per cent of the total. Sex ratio is low, 958 females per 1000 males. Sixty five per cent of the settlements are of less than 500 population. This renders most of the settlements uneconomical for the provision of even the minimum level of infrastructure facilities and amenities.

Bhat discusses pattern of population distribution in chapter four as 'Resource base' which should rightly be resource base and population distribution. In chapter five, the author discusses spatial organisation of economic activities: infrastructure facilities and amenities. Detailed description of health, educational and transport facilities is given. Food and beverages, wood processing and general engineering are among the important small scale industries. Their distribution is very well shown in the tables on regional variations. An important result of author's exercise is that all the 170 settlements comprising towns and villages of over 1000 population selected for this study have been evaluated in the context of their present and future possibilities for being designated as centres providing social facilities and amenities and non agricultural economic activities to promote integrated development of settlements and resources of the area. A 'composite score' is worked out for each settlement. So here is an action programme for those interested in planning at local level. It will have to be costed through to assess the amount of investment required. We hope that the Government of Karnataka so deeply committed to decentralised development will mount an action programme for the development of North Karnataka region.

Lately, there has been too much bureaucratesation of the rural development programme and people have become subsidy grabbers or subsidy dependent. It is time to retire the bureaucracy from direct assistance and entrust such work to research institutions or non government organisations or organised groups, and confine their energies to designing appropriate development projects. It is even important that research institutions interested in the 'laboratory' of development are given charge of actual planning and implementation of the development plan. Bhat's study only strengthens this reviewer's belief that professional people need to be brought closer to translating rural development into fulfilment. The need of the day is to present an appropriate methodology for the design of development, a methodology which is tested and which is within the capabilites of those affected to undertake. Bhat's study contributes immensely to furthering such a thought. We hope that this little book shows the way and hope that it will be widely read and adopted.

S.M. SHAH

Rural Industrialisation in India—Strategy and Approach : By Dr. Srinivas Y. Thakur-Sterling Publishers (P) Ltd., pp.137-Price Rs. 90/-

The book based on research Projeet undertaken by the author at Chr. Michelsen Institute, Bergen, Norway in 1980 autumn, attempts to focus attention primarily on the question of what precisely has gone wrong with Indian planning, throws light on the shortcomings of the growth model pursued so far and suggests an alternative to meet the twin problems of poverty and under-employment, which are projected to assume alarming proportions. It seeks to make out a strong case for rural industrialisation and to suggest a suitable strategy for development in the 80s spelling out its essential

elements. The entire study has been divided into six chapters followed by an epilogue as the concluding chapter. In chapter 1, that rural industrialisation needs to be the key note of future development strategy, if Indian economic planning is to succeed in making effective and concerted attack on slow growth, poverty, unemployment and underemployment has been stressed. Chapter 2 presents a detailed case for rural industrialisation. Chapter 3 focusses attention on the types of agro-industries and small enterprises that could be set up for promoting integrated development of the rural area whose resources could be exploited optimally to promote the growth of rural incomes and employment on a sustainable basis. Chapter 4 takes the reader through the familiar area of economy with 70% of the people depending on agriculture even after three decades of planning, how that percentage needs to be reduced substantially and shifted to other sectors of economy and further talks about green revolution which resulted in widening the disparities between rich farmers and vast multitude of small and marginal farmers and points to increasing weaknesses and limitations of several ameliorative programmes such as SFDA/DPAP which are at best in the 'nature of pallatives rather than correctives.' It further suggests how the non-farm sector labour force should grow from the existing level of 10% of rural labour force to over 30% in the next 2 or 3 decades. In chapter 5, the author suggests an overall strategy for rural industrialisation and indicates measures that might be necessary to give concrets expression to such a strategy. Chapter 6 throws light on the types of industries—whether agro-based or otherwise-which can be promoted in rural areas as part of the rural industrialisation drive and thus provides an analytical framework in this regard, keeping in view that essence of rural industrialisation lies in setting up industries which maximise the local income and employment multiplier and while reiterating that our densely populated and predominantly agricultural country, expansion of non-farm activites is essential as it strengthens the agricultural sector itself and increases the volume of productive employment The book in question serves as a useful addition to the increasing literature on the subject.

S.N. BHAGAVAN

Growth and Income Distribution in India: Policy and Performance since Independence by R.M. Sundrum: Sage Publications, 1987. Price Rs. 195/-

Prof. Sundrum, a Fellow at the Research School of Pacific Studies, Australian National University, in his book on Development Economics, 1983 had attempted to synthesise the main ideas on analysis and policy as applicable to the unique circumstance facing less developed economies. Application of these generalised principles to evaluate the experiences of India forms the content of 'Growth and Income Distribution in India', the book under review.

The book is in two parts: Part I devoted to Economic Performance and Part II to Economic Policy. Part I traces the performance of the Indian Economy since 1950 in terms of the status of poverty, demographic factors, savings and investment, structural changes and income distribution, while Pat II covers economic policy in the wider matrix of policy network under development, production and distribution policies and the mobilisation of resources. The book concludes with a chapter on Planning and Administration necessary for promoting development.

Prof. Sundrum analysing the structure of production in 1983 between different countries concludes that the % of GDP originating from industry in India is 26 as compared to 37 in LDCs, manufacturing 15 against 21 and services 38 against 43 in LDCs (P 31). India is more unequal than Bangala Desh, Sri Lanka and Taiwan and less unequal than Malaysia and Phillipines in respect of income and expenditure inequality, structurally witnessed a slow rate of growth in agricultural productivity and a slower rate of technological progress in agriculture, recorded an average growth of 5.3 in industry and 5.2 % in manufacturing for the period 1950-51 to 1981-82 and shown a decline in poverty levels in the rural areas from 54.1% in 1956-57 to 40.4% in 1983-84 and in urban areas from 40% in 1960-61 to 28.1% in 1983-84.

The author in his policy perspectives calls for a liberal economic system, removal of constraints technically limiting widespread education, creation of infrastructure ahead of demand, relaxation of agricultural constraints on overall growth by exploiting available potential, better management of state industrial enterprises and asset redistribution for reducing income inequality and poverty. Planning in stages and an effective interaction between development administration and local participation has also been suggested.

Written in a lucid style, the book makes interesting reading providing at one place, comprehensive empirical data on almost all aspects of socio-economic development in India together with theoretical appendices. The publication would be useful to planners, policy-makers, research scholars and students interested in evaluating and assessing the performance of the Indian Economy.

MRS. GANGA MURTHY

Dynamics of India's Invisible Trade: by Dr. Neela Mukherjee; Sterling Publishers Pvt Ltd, New Delhi-110 016; Pages 94; Price Rs. 60/-

Even as the multilateral talks on trade in services under the Uruguay Round has been stoutly opposed by the developing countries on account of their fairly infant status in services, the book under review on trade in invisibles such as trade pertaining to services, investment income, travel and government and private transfers is highly timely. In India, invisible receipts have been contributing to an increasing inflow of foreign exchange in recent years. Yet, there were very few among Indian economists who have scanned in detail the aggregate and sectional movements in the country's invisible account. As such, Dr. Neela Mukherjee's book

fills a vital gap.

As the author aptly said, invisibles can no longer be brushed aside as something insignificant and negligible. The study is an earnest attempt to project how India's invisible trade has fared over the years and across regions, its future shape and the options at hand to deal with the problems portrayed. According to the author, Government policies have been influential in the case of invisibles like travel payments, transfer payments and even investment income payments. As such, growth stimulating factors have outweighed growth restraining ones and the net outcome was substantial surplus invisibles account, especially in the seventies.

The author rightly sounded out a warning signal. In recent years technological progress has increased the intensity of techology and has supervened shifts in both volume and direction of investment, both foreign and domestic. Foreign investment has flowed to sectors like manufacturing and pétroleum where technology has been improving rapidly, yielding higher returns, and, as a result, the outflow on profits and dividends has also enhanced. As such, the author advocates that payments on certain invisibles need to be controlled and regulated to the extent feasible. Payments on invisibles such as private transfers, government transfers and travel need to be regulated in such a manner that the limited foreign exchange reserves are not frittered away on unnecessary expenditures. The author said three items of invisible receipts from OECD (Organisation for Economic Cooperation and Development, a club of 24 rich countries) may be explored intensively for raising of receipts, viz., travel, government transfers and private transfers.

Dr. Neela Mukherjee said compared to other items of invisibles, services have been much more stable as far as their behavioural pattern is concerned. As such, intensive efforts need to be made in increasing indigenous shipping capacity and extending technical assistance to developing countries on a larger scale. The author righty concludes that Government should be watchful on the deficit on investment income (foreign loans). Though the book refers upto the period of 1980, subsequent developments have pointed out that the negative forces of investment income had widened. But as the author said that this should not be allowed to outweigh the positive impact of other items, leading to a deficit in invisible trade, thereby creating further complications in the already existing balance of payments problems. Fortunately, we are off from such a perilous possibility.

G. SRINIVASAN

MANAGEMENT OF PUBLIC ENTERPRISES IN INDIA by B.C. Tandon, Professor of Management, Faculty of Management Studies, Delhi University: Chaitanya Publishing House, University Road, Allahabad 211 002, pp. 280, Price : Rs.50/-

If there is a single dimension of the economic scene that has attracted widest possible attention in recent years, it is the growing divergence between objectives and performance of public enterprises in the country. The overall functioning of these enterprises, termed as the commanding heights of the economy has been such as to elicit a cryptic remark by the late Prime Minister as a *picture of sadness*. In many areas of concern, be it productivity, profitability, pricing, personnel management to mention the more outstanding, the results have fallen far short of expectations. In this book, the author traces the many issues and problems conforonting these undertakings, their root causes and alternative solutions and recommendations of various committees and experts to improve the performance both at policy and corporate levels. Of the sixteen chapters around half are devoted to a discussion of the various issues confronting management while the first four chapters are merely a historical narrative. The last two chapters are an epilogue to the earlier discussions and contain some suggestions for further improvement. Some of the main topics of interest essayed in this publication relate to decision making, accountability and government control, privatisation as a remedy and management problems including financial, personnel and professional management. As the author observes, the main variables exhibiting the despair of public enterprises are discussed in the book. On the question of privatisation of these undertakings, outright closure of these enterprises and auctioning them off to private parties is considered scarcely feasible. On the other hand, the latest concept, it is believed, is that which basically relates to a model of private enterprise management. The emphasis here is one of creating a competitive environment and if possible of competing with the private sector for raising funds in the market. The requirements of efficiency would indicate provision of utmost autonomy to these enterprises from bureaucracy and freedom from unnecessary political control and decentralised decision making. Public control, if any, should be limited to accountability as reflected in achievement of plan targets and generation of surpluses.

In presenting the various alternatives and solutions to the problems that have plagued public enterprises all along, an academic character to the discussions has been lent. The author has carefully avoided any predictable suggestions based on his analysis of past trends! A useful addition could be the provision of statistical support particularly to some of the controversial aspects of growth for instance financial and economic returns on investment. The material presented in the chapters is fairly elaborate even overlapping at places. The author has made generous use of his lecture notes prepared for the training programmes in which he might have participated! The material however calls for further summarisation without changing the focus of the study. An instance is the needlessly extensive and detailed review of pricing in the steel and energy sectors, which could easily be relegated to an Annexure for the student and researcher who may be interested in such details.

The dilemma of public enterprises continues unabated viz., autonomy v/s accountability: profitability v/s social objectives and so forth. The nature of these

enterprises and the complexity of their activities are such as to defy any universally applicable and specific method of management. Notwithstanding their limitations, it is some comfort to know that public enterprises have an increasingly larger role to play in future !

K.S.V. SANJEEVA RAO

RURAL DEVELOPMENT THROUGH IRRIGATION by D. VASUDEVA RAO published by Ashish Publishing House, First Published 1987; pages 153 price Rs. 130-

Irrigation is one of the most important components of inputs used in agriculture. It makes available moisture supply for cultivation and is of considerable help in areas of insufficient and fluctuating rainfall. Reliable and timely water supplies enable farmers not only to get higher yields through greater use of complementary inputs like fertilizers and HYV seeds but also make additions to crop acreage.

The book which is divided into seven chapters is based on the ex-post evaluation of the impact of irrigation on the socio-economic agricultural practices of the people in a command area in the Karnataka State. The study aims at quantifying and linking the various facets of development with irrigation as the starting point for all round development of rural areas. The main objective of the book is to study in depth how irrigation holds the key for agricultural development in particular and consequently rural development in general at (i) the micro level, the cultivator households and (ii) the macro level where the taluk as a unit is taken up for the study of the overall development.

At the farmers level the various aspects studied in the benefited village and the control village in order to assess the impact of irrigation are:

(a) Work participation of family female labour
(b) Attendance in the schools of the school age children
(c) Area under cash crops
(d) Optimum labour usage
(e) Use of inputs on time, in sufficient quantities
(f) Proportion of (per consumption unit) expenditure on non-food items in the total expenditure
(g) Per capita income.
(h) Indebtedness
(i) Housing conditions and availability of amenities and facilities and
(j) Position of people with regard to poverty line.

The taluk, village and the sample farms have been selected systematically and with careful consideration. In order to confirm that the results are due to irrigation and thus eliminate chance factor, a macro level study comparing two neighbouring taluks-one dry and one wet at two points of time in 1973 and 1980, and the same wet taluk over time (in 1973 & 1980) is undertaken. This has served as a cross sectional as well as follow up comparison for the wet taluk. Secondary information was collected on important variable, which could be quantified: Changes in literacy, population, employment, land use, crop pattern agricultural implements social infrastructure etc. This was supplemented by personal observation and opinions expressed by various local leaders of the village. It could be concluded that irrigation has played a successful role in transforming the once dry village to prosperity. The results confirm that the micro level results are not by chance as the same trend is maintained at the macro level.

The chapter on statistical treatment in order to guage the impact of irrigation is illuminating and reveals the soundness of the author in the mathematical application of the problem as well. The author should have explained why a Cobb-Douglas production function has been selected. Further, a regression taking different inputs as the explanatory variable could have been run in order to get the impact of irrigation on the value of total output.

The author has rightully recognised a serious lacunae in his approach. It would no doubt be better to compare he pre-irrigation data with the post-irrigation data in order to understand the impact of irrigation i.e. a time series analysis would have been much superior compared to cross sectional study. But because of certain problems the author was unable to carry out the former. Also, time series analysis would have covered a longer time horizon and not taken only one year as the reference period. The second chapter on review of literature which throws valuable insights at the micro level studies, giving in brief the views of various economists, should have been better as an Appendix rather than as a main chapter.

The book clearly brings out that irrigation leads to stable yields, more intensive land use., increased incomes from farm cultivation and also increased overall income. It also confirms that irrigation causes important externalities,complementarities and indisict effects that create evolutionary changes in farm size, farming methods and practices, cropping patterns, crop yields, farming economics and farm management.

URVASHI SADHWANI

TEXTBOOK OF OFFICE MANAGEMENT by V.S.P. Rao and P.S. Narayana, published by Tata McGraw-Hill Publishing Co. Ltd., 4/12, Asaf Ali Road, New Delhi 110002. First published: 1987. Page 480. Price not mentioned.

Managing an office anywhere has become a subject to be handled with circumspection and study. Gone are the days when one would learn by doing things. Today, with a lot of mechanisation and huge organisations, efficiency of work is measured in terms of how things are actually performed within an office. To this end in view, the authors have addressed themselves to a vast area of specialised knowledge required at various levels in an office set-up.

Due to the growing importance of the subject, a number of universities have introduced courses on office management or papers in the existing courses.

The authors claim that the book is primarily intended for B. Com. students of various universities. Contemporary ideas and examples have been presented for conveying the dynamism of the discipline.

The seven parts of the book contain as many as 28 chapters dealing with all relevant aspects of office management. Broadly, they tackle with the themes of office activities, office tools, office services, human resources, and control of office operations. Office equipments have been explained with photographs, designs, illustrations an so on.

Cost and budgetary control constitute an important element of office management. The authors point out that managerial success of any enterprise lies in getting the work completed satisfactorily within a certain cost. In an office, cost control is basically concerned with the cost involved in performing various operations. In fact, cost control is also concerned with the ways and means of keeping the costs at a lower level without affecting efficiency and effectiveness. Naturally, therefore, any office organisation has to concentrate on cost control with the help of experts.

The various ramifications of training, communication system, work measurement, standards, etc., have been elaborately described in the book. Surely, the book meets the long-felt need for a book of this type for students aspiring for a specialised knowledge of the subject before actually handling their jobs in offices.

NAVIN CHANDRA JOSHI

THE AMAZING WORLD OF INSECTS by U.C. CHOPRA; PUBLICATIONS DIVISION; Price Rs. 11/- Page 110

This book appears to have been written for the general readers not acquainted with the subject.

Insects have their own utility in Nature. If there are pests like cockroaches, flies, mosquitoes and locusts, there is honeybee as well which is an important source of food and nourishment in the form of honey. The butterflies delight us by their colours. Some of them have fantastic combinations. Insects like wasp are nuisance. They terrify the human beings. Everybody wants to avoid a wasp's sting but it kills a lot of insects to save our food. The dragonfly may look fragile but it is an accomplished aviator.

These interesting facts apart, the book suffers from a lot of shortcomings. It has no introduction. The illustrations are all unartistic. A little care in drawing might have made a difference.

The author points out that the vision mechanism of human beings and insects is a matter of mystery. This is not the fact. The principle is well known.

The chapters on scorpions and spiders are inappropriate. These species belong to the order of Arachnida and not Insecta. These factual inaccuracies detract from the book and may discourage the discerning readers.

S.M. KUMAR

(Contd from page 29)

for effective control of this disease. Support by crepe bandages and elevation are necessary measures.

CASE: Mrs. Sehgal,86, suffering from this disease for 15 years used to take Homoeopathic treatment. The blueness and swelling used to get more in winter. She had a strong symptoms inspite of prolonged and otherwise effective treatment that as if she is walking on a cotton pad (on sponge) which was persisting ever since she developed this disease. *Heloderma 200* few doses removed that symptom and made her capable of walking confidently helping in the process of cure of this disease.

Warning :the above mentioned medicines must never be taken without consulting a recognised Homeopath.

Wind power station in karnataka

The Department of Non-Conventional Energy Sources, in the Ministry of Energy, has taken up a 550 KW wind farm project in Brahmagiri Hills at Talcauvery in Karnataka in association with the Karnataka State Industrial Investment and Development Corporation. The Union Department has provided a sum of Rs. 60.50 lakhs for the project.

The wind farm is expected to supply nearly a million units of electricity a year to the State power grid. This information was given by the Minister of Energy, Shri Vasant Sathe, in reply to a written question in the Rajya Sabha during the mansoon session.

Lesser of crude oil imports during 1988-89

It is proposed to import 18.06 million tonnes of crude oil during 1988-89 as against 18.34 million tonnes imported during the previous year.

In written reply to a question in the Lok Sabha in the last session, the Minister for Petroleum, Shri Brahm Dutt said that an average price of Rs. 1698 per tonne was paid for crude oil imported in 1987-88.

Earlier, in 1986-87, 15.48 million tonnes of crude oil had been imported at an average price of Rs. 1370 per tonne. In 1985-86, an average price of Rs. 2435 per tonne was paid while importing 15.14 million tonnes of crude oil.

The Minister said that contracts for import of crude oil had been signed with National Oil Companies of various countries including USSR (4 million tonnes), Saudi Arabia (2 million tonnes), Iraq (3.5 million tonnes), United Arab Emirates (0.5 million tonnes) and Iran (2 million tonnes).

The Minister said that contract with Kuwait for import of 0.5 million tonnes of crude oil was yet to be finalised. ☐

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Our achievements in high-tech

Prof. Dhirendra Kumar Dixit

The author here makes an assessment of India's overall performance in the sphere of high technology. For an ancient tradition-bound nation like India, the transition from the bullock-cart age to the space-age is no mean an achievement. Claiming that we are on the threshold of a new era of hi-tech, the author feels that development should be without distortion and suggests that the gulf between high technology and rural poverty should be bridged without delay.

WE ARE IN THE MIDST OF an "information explosion." 'Catching up' with the West is an ambition that strikes a responsive chord in most Indians today. The post-war technological revolution is simply mind-boggling, both in its range and impact. Thanks largely to the vision and foresight of India's first Prime Minister, Pandit Jawaharlal Nehru, Indian was quick to realise and recognise the importance and urgency of scientific research and its technological-fall-out soon after independence. The emphasis on promotion of science and technology was pursued by both Lal Bahadur Shastri and Indira Gandhi.

Temples of technology

Ever since Independence, the Ministries of Atomic Energy as well as Science and Technology (and later Electronics, Space, Environment and Ocean Development) have been presided over by the Prime Minister. Nehru acted as a catalyst to spread the scientific temper and helped build modern 'temples of technology'. Mrs Gandhi, the *Queen of Indian Science,* took Indian science and technology far beyond its geographical boundaries, literally from the depths of ocean to the vast expanses of space.

India, where zero was invented, can pride itself on being the third nation in the world, next only to the United States and the Soviet Union, in Science and technology.

And India has the best chance of succeeding among the developing nations. Vast natural resources and the ingenuity of Indian people together can bring about a high-tech revolution in restraint. Restraint because we should avoid the perils of indiscriminate industrialisation and the associated ecological menace and environmental hazards, capitalising instead only on the promise and potential of the state-of-the-art technology in all spheres of activity.

No mean achievement

Our achievements in the areas of frontier technology have been staggering; our commitment and concentration in putting the best scientific foot forward, total. Difficulties and dilemmas too are familiar and formidable. For an ancient, tradition-bound nation, the transition from the bullock-cart age to the space-age is not without its trauma or travail. But despite poverty and unemployment, despite illiteracy and the ignorance prevalent in large parts of the Indian sub-continent, what we have today to show to the world is certainly no mean achievement and no platitudinous self-congratulatory exercise either.

The ushering in of the much-flaunted 'Green Revolution' has boosted agricultural production manifold over the past two decades, transforming the countryside. The fantastic promise of biotechnology and its far-reaching implications are not widely acknowledged in India. A National Biotechnological Board has been formed and many research organisations have jumped on to the bio-tech bandwagon. Apart from the discovery of plant growth nutrient to dramatic increase in the crop yields, efforts are afoot in India to develop nitrogen-fixing bacterial cultures (rhizobium) which when applied to seeds increases the productivity of leguminous crops.

Tissue culture

Research is also underway to develop tissue culture of high value crops, vaccines against TB, amoebiasis and for contraception, alcohol from molasses and cellulose, edible oil from molasses, bio-fertilizers and self-fertilising plants. Commercial applications of this newly-discovered science for enhancing the output of 'inter alia' drugs and formulations, chemicals, fertilisers, and agricultural produce at a comparatively modest cost, in terms of additional investment, are too tantalising to be dismissed lightly.

Antarctic exploration

India's Antarctic exploration programme has mounted expeditions to the unknown continent of unexplored wealth. It has now established a permanent base with an impressive research package and the prospect of a golden harvest. The cost of mounting the expeditions is pretty high, with ships chartered from Norway and Finland. The economic benefit accruing from the mission is that the weather pattern of the Indian Ocean, and hence of the monsoon, may be determined in this region of the Antarctic.

It is certainly a great leap forward to have a permanent station in one of the richest, largely untapped regions on earth. The seven expeditions so far to this fascinating frozen continent also underline India's quest for mineral, oil and living-resource wealth. The exploitation of this wealth may, with technological development, become economically viable in the foreseeable future.

Search for mineral deposits

Equally important for India's policy of self-reliance is the search for deep sea mineral deposits in the central Indian Ocean and the work on extracting organic chemicals, including pharmaceuticals, from marine life. In 1981, polymetallic nodules were found in the Indian Ocean giving a glimpse of the goal India has set for itself.

The tangible outcome of India's forays into seismic surveys and earthquake predictions as also the hunt for minerals, oil and natural gas on land has stimulated research and generated enthusiasm. The practical imprtance of the geophysical investigations is the discovery beneath the igneous layer of a sedimentary basin, perhaps 100,000 km in extent, where substantial economic reserves of coal— and perhaps oil and gas— are indicated.

Two wheel industry

The recent two-stroke revolution with an accelerating growth rate of popular two-wheelers marks a sea change. The two-wheeler industry is today in top gear and opening throttle. The world's best bikes are coming to India and the buyers are queueing up. And for some of the best known scooters like Bajaj, the world is the market place. The plethora of vehicles engaged in a competitive race augurs well for the buyer. It is no longer a sellers' market.

Oil exploration

In the field of oil exploration, India's thrust for self-sufficiency is evident. Prospecting for petroleum calls for frontier technology. The Iran-Iraq war, by disrupting the flow of crude from India's major suppliers, has highlighted the importance of having an assured supply of oil. According to a survey conducted by the Energy Policy Committee in 1979, energy consumption is linked with economic progress. There is a direct correlation between energy consumption and the per capita income of a country. The per capita oil consumption in the USA in barrels per annum is 51.7 while that in India is nearly 0.9 much less than the world average of six. Obviously, India is keen on expanding its offshore operations where, according to geologists, at least 45 per cent of the crude reserves remains to be discovered.

Nuclear energy

Nuclear energy for peaceful purposes has always been the aim of India's rulers. Thanks to Dr. Homi Bhabha's vision, India is the only country in the developing world which has mastered the technology of the entire nuclear fuel cycle right from mining and milling to generation of power to radioactive waste management. With an installed capacity of 1075 MW, India is poised for 10,000 MW power production capacity by the turn of the century. Despite hurdles and handicaps and hassles and harassments from the developed countries, especially after India exploded the nuclear device in 1974, she has not swerved from the path of self-reliance in this frontier technology, which has myriad applications in agriculture, medicine and industry too.

Efforts to develop renewable energy sources have unfolded at an unprecedented scale and pace since the 1973 oil embargo. Renewable energy sources already provide about 18 per cent of the world's energy, mainly in the form of hydropower and wood fuel. Energy from environmentally benign sources like the sun, wind, tidal waves, geothermal sources and biomass has tremendous potential for development in India New patterns of employment, new designs for cities and a revitalized rural sector could all emerge with renewable energy development.

Renewable energy sources

India has begun with a bang to exploit the immediate and long-term potential of renewable energy sources, particularly solar energy. Financial incentives are being offered by central and state governments and their impact on the marketing of renewable energy-based products and systems is already being felt. The use of solar energy for water heating, air heating, drying, cooking, pumping, desalination, cooling and for direct generation of electricity through photovoltaic route is drawing considerable attention.

N.T.P.C

The conventional energy scenario is also very promising with several fossil-fuel-fired thermal power stations producing electricity all over the country. The success story of the National Thermal Power Corporation in executing superthermal power plant projects in record time with remarkably high capacity utilization highlights our technological expertise and experience in this vital field.

With the first experimental fast breeder test reactor already commissioned, we can look forward to the 'breeder technology' which yields more fuel than is consumed by the nuclear reactor. The government has

committed a major chunk of its resources to the implementation of an ambitious nuclear energy programme.

Space programme

The Indian space programme, since its inception in 1961, has been strongly oriented towards the needs of the country, which means concentrating on communication satellites, meteorology and remote sensing. At the same time, since the establishment of India's first rocket-launching facility in 1963 at Thumba, India has come to a point when it could, in September 1983, launch and deploy the unique multipurpose operational space system INSAT-IB providing telecommunications, meteorological and television services from a common satellite. India's space efforts reached another charismatic climax with the "visit of cosmonaut Rakesh Sharma to the Salyut-7 space station.

Operational era

The launching of the Indian Remote Sensing Satellite IRS-IA, from a Soviet cosmodrome on March 17 this year marks the beginning of the operational era of Indian space-based earth observation systems offering unique possibilities in obtaining information of terrestrial resources and environment. The failure of the Augmented Satellite Launch Vehicles (ASLV-DI and-D2) in 1987 and 1988 notwithstanding, India is determined to launch the ambitious Polar Satellite Launch Vehicle (PSLV) which will place 1,000-kg remote-sensing satellites in orbit. The first PSLV flight is likely to take place in 1990. INSAT-IC, whose launch was postponed becuase of the suspension of the US space shuttle flights, will now be orbited by the Ariane 3 rocket from Kourou in French Guiana this year. The satellite is expected to give a boost to the communications revolution brought about by its predeoessor INSAT— IB, which has been in space for five years.

Superconductivity

Indian scientists-faster into the future-are on the verge of a breakthrough in the current world-wide research in the field of high temperature superconductivity. The implications of evolving superconductors will be far-reaching. Some of the possibililties in the realm of reality are: trains that run on magnetic levitation at over 500 km an hour, cars and other personalised transport needing no fuel, high-tech computers that are small and work faster, cheap medical scanners, under-ground cables that carry six times more electricity than normal cables. Mind-boggling indeed !

Electronics

Another high profile area of techology where India has succeeded in an ample measure is electronics, computers and robotics. Electronics has become a dominant industry with a phenomenal growth rate of 49.5 per cent in 1982 in terms of value of production. Be it consumer electronics, communication and broadcasting equipment, aerospace and defence equipment, electronic components or computers, India's achievements over the past three decades are impressive.

Electronics exports, despite intense competition from the Far East Asian countries have grown steadily. Consumer electronics has also received an impetus following a major revision in the government policy; television sets' production is fast catching up with the widespread public demand. The video wave has added yet another dimension to the sudden spurt in the electronics industry.

Computer power

The major revolution taking place today is that computer power is drifting down to the average household from the seclusion of large corporate data-processing in offices and institutions. New manufacturers, easy component imports, lower duties and cheaper products have combined to put zip into the computer industry which trebled sales in just three years.

India's confident entry into the 'computer age' following the advances in computer technology and the worldwide changes in the markets is an encouraging trend. The robotics industry in India, though in its infancy, is making valiant efforts to at least partially 'robotize' Indian industries particularly where hazardous environment and repetitive, monotonous operation favour their use.

Other fields

The hallmark of superb technology is also transparently clear in other fields too: in our automobile industry, trucks and tractor industry (remember the famous case of transfer of technology from the laboratory to field when a CSIR laboratory's research facilitated commercialisation of Swaraj tractors in Punjab ?), toy industry, moulded luggage industry, packaged food industry, garments, textile and leather industry, armaments industry, printing industry etc. In fact, the impact of emerging technology in electronics and computers on mass media and communication is a matter of our every-day experience and observation.

Supercomputers, with their ability to do millions of calculations in minutes, can practically do the impossible. India is now acquiring the sophisticated and state-of-the art Cray XMP-14 supercomputer which will give farmers long-range weather predictions to better plan their sowing and harvesting dates.

N.T.M

The five National Technology Missions (NTM)-on drinking water, immunisation, adult literacy, oilseeds production and telecommunication -to be overseen by Sam Pitroda, Adviser to the Prime Minister, have far-reaching significance with colossal potential to transform the face of the nation. The Government's ambitious scheme to install rural automatic exchanges (RAX) designed by Pitroda's Centre for the Develop-

(Contd. on page 33)

Technological strategy for the North-East

Dr. B.K. Paul

The technological strategy for rural development in the North-East calls for a meaningful implementation of appropriate technologies in the fields of education, agriculture, animal husbandry, industry, housing, health, hygiene, transport, communication etc. keeping in view the region's topographical features, soil, weather conditions and different living practices. The north-east, says the author, is blessed with plenty of potential/ resources whose proper channelising and development with the help of technologies, traditional and new, can usher in the desired development.

WHATEVER RESULTS WE HAVE ACHIEVED so far in the realm of rural development through more than a dozen schemes and programmes at various national and state levels, have mostly helped create a new elite class among the rural people instead of bringing about all-round development of the rural masses. The northeastern region covering a vast area of 2.5 lakh sq km beset with difficult terrain and poor communication facilities has got special circumstances unknown in any other part of the country. Over 90% of the 26.6 million people of the North-East live in villages which are located at different altitudes varying from 100 to 4,000 metres and having different climatic and topographical features and different living practices. Although rich in natural resources, the region has been rightly described by many as an 'island of poverty in the midst of plenty.'

The technological strategy for rural development in the North-East, therefore, calls for a perspective appraisal of these special circumstances. Technologies are as much necessary for physical and mental well-being of the rural people as they are for their economic emancipation. Thus, we not only need suitable technologies in the fields of agriculture, animal husbandry and industry for strengthening the economy of the villages, but we also need appropriate technologies for housing, health and hygiene, transport and communication, recreation, education and energy needs of the rural people for their survival without agony.

Rural housing

The majority of the vast multitude of rural population of the North-East cannot afford to live without traditional thatched houses whose longevity is poor and which are prone to fire hazard, and many of the houses have mud walls needing fortification every year. It is a common sight in our interior hill areas that at times during dry season accedental fire causes destruction of an entire village because the houses are built in a community pattern adjoining to each other with fire-prone materials. Again, almost invariably a rural hill man in this region desires to use the centre of his home as the fire-place for the multiple purposes of cooking, heating, lighting and smoke utilization towards protection of his house against insects and towards preservation of perishables like meat etc.

In such circumstances, we not only need to adopt extensively the existing technologies for low-cost rural housing with fire and water proof devices, but we also need to give serious thought towards evolution of suitable technologies for improving the design of the tribal houses using the materials they use and causing least disturbance to their mode of living. Such measures are necessary till the time when our persuasive efforts will succeed to change the age-old way of tribal living with provision of alternative technologies to take care of all the above requirements.

Health & hygiene

Reportedly, the average death rate in the rural areas in the North-East is 11.2 per 1000 population against all-India average of 15.3 per 1000. Such statistics are often misleading since there are many tribal pockets in this region where annual death rate is much higher than that in the plains. Many of the unfortunate health hazards are attributable to poor medical facility, but a major cause is the lack of appropriate amenities the cause for over 80% of the diseases in the villages of this region.

Realising the miserable pace of progress in this field in the country, the Ministry of Works & Housing has reportedly drawn up a scheme for giving income tax concession to business houses who will participate in the programme for providing safe drinking water and scientific sanitation facilities to the rural areas so as to

cover 100% population in the country with adequate amenities in this regard by March, 1990. But the business houses, at the most, can be expected to provide this facility in the areas close to their places of operation. It will be unrealistic to expect them to undertake such activity in remote areas even with the availability of tax concession, and this is where the problem of the North-East particularly lies. The National Water Technology Mission launched in 1985 is expected to overcome this problem substantially.

The menace of goitre, a disease caused by iodine deficiency, is widely prevalent in the hill villages of this region. Utilization of technologies for salt iodization is yet to take any tangible shape in this region, although much discussions are afoot in this regard. Ecological imbalance caused by indiscriminate destruction of forest is another factor affecting the health of the rural people. Widespread adoption of technologies for afforestation with fast growing species is a dire need to tackle this problem.

Transport and communication

Although various schemes providing easy transport and communication facilities are in operation under the aegis of NEC and other state agencies, the hard fact is that still today heads and backs of human beings are the only mode of transport in most of the hill areas of this region. The drudgery of human beings and wastage of human energy is unimaginable. Reportedly, the Central Road Research Institute, Delhi, has undertaken a comprehensive programme towards development of appropriate technologies for construction of all weather roads for villages in the country. In order that such a programme is of any meaningful utility to the North-East, it is essential to undertake location specific investigations towards construction and maintenance of rural roads keeping in view the special topographical features, soil and weather conditions and other relevant factors prevalent in this region. Another aspect of surface communication is the development of inland waterways in the hill areas, such as the river Longai in Mizoram, as a cheap means of movement of horticultural and other commercial commodities from the interior hills to the markets in the plains.

Regarding postal and telecommunication facilities in the North-East, the less said the better. The people in our far-flung hills still depend on the age-old method of shouting and sound reflection to establish contact between different villages. With the artificial satellite like INSAT I-B in operation, it is not at all impossible to provide our hill villages with a network of micro wireless communication facilities accessible to all people in the remote areas.

Education and training

The tremendous economic and educational distance between the rural people and the agents responsible for rural development often accounts for the failure of our efforts towards rural upliftment. Since independence, many experiments have been and are being conducted towards the improvement of method of teaching and towards raising the standard of education, but the light of even the elementary education is yet to reach many of the interior villages in the North-East which is a sad pointer to the failure of our plan for making education compulsory for children upto 14 years of age. Extensive arrangement for use of electronic and audio-visual mass media like the radio television will be the quickest and the surest way of spreading education among the masses. This will also facilitate the avenues for mental recreation of the rural people which is so much necessary for greater productivity. The National Literacy Mission launched this year may be thought to be geared up in this line.

The importance of education of the rural masses should also be judged by its impact on the socio-economic life through improved production and productivity. Such an objective can be achieved only through creation of widespread rural facilities for vocational training-cum-demonstration of appropriate rural technologies in rural set up with the involvement of the rural people. The impact of the so-called appropriate technologies will continue to be negligible in the villages if our 'know-hows' are not appropriately backed up by 'show-how' arrangements.

Energy needs

The current awareness for renewable resources of energy is undoubtedly very relevant for rural developmet in the North-East where we have plenty of forest and agro-wastes, fairly good wind velocity in the foothills and good sunshine in many rural areas. Nevertheless, the villages of the North-East will continue to depend predominantly on firewood for their energy needs foor cooking, heating and also for lighting in many hill areas where even the use of kerosene is unknown, not to speak of electricity. The most pragmatic proposition to meet the challenge of energy needs of the north-eastern villages will be to make massive efforts for energy plantation with fast-growing species. From scientific point of view, photosynthesis by plants is by far the most efficient means for tapping solar energy, which is the most fundamental source of energy on earth.

As regards the utilization of renewable energy resources, one area which needs all emphasis is bio-gas generation. It has been estimated that the dung of nearly 8.1 million cattle heads of the North-East can produce annually about 10.7 billion cubic metres of fuel gas (equivalent to 7 lakh tonnes of kerosene) and 7.2 million tonnes of manure (equivalent to 1.1 lakh tonne of nitrogenous fertilizers. The present annual consumption of nitrogenous fertilizers in the whole of the north-eastern region is reported to be only 10.567 tonnes. This estimate has been based on only cattle population, which excludes poulty and another 3 million heads of other livestock animals like horses, pigs, sheep, goats, etc. the dung of which can be ideally used for a bio-gas plant. Even if one-third of all the available dung in the region can be mobilized planfully

it will suffice to meet the fuel need for cooking and lighting of all the villages in the region.

Agriculture and horticulture

The climatic conditions, topography and landholding pattern in this region call for a different strategy of technology utilization in agriculture and horticulture. Costly agricultural implements such as power-tillers and tractors used elsewhere are beyond the reach of the marginal farmers of this region who constitute the bulk of the rural population ranging from 73.9% in Meghalaya to 90.89% in Tripura. There is urgent need for development and application of new intermediate technologies as a bland of the traditional and the advanced capital intensive technologies, in order to have a suitable alternative to the age-old way of tilling and farming which is still dependent on the mercy of nature for irrigation and the traditional bullock and plough for cultivation.

The pernicious effect of shifting cultivation has been well recognised and much talked about. But the fact that *jhumming* is still the preferred mode of agricultural practice with the tribal people and this is still their major economic activity suggests that there ought to be some merit and sound reason for the survival of the *jhumming* system upto the present time. The major problem of *jhumming* is due to the compulsion of shortening the *jhum*-cycle from about ten years to bare 3 years now. So, while making all efforts for settlement of the *jhumias* to organized cultivation, it will be appropriate to make simultaneous efforts towards evolution of suitable technologies for modification of the *jhumming* system itself. This demands orientation of R & D efforts for quick building up and maintenance of fertility of the soil so that the tribal farmers may find some means of earning enough basically through their traditional economic system, even at the reduced period of *jhum* cycling.

The agro-climatic condition of the region is admirably suitable for the growth of almost every kind of horticultural crop. Unfortunately, most of the economic gains from such crops have often gone to others, rather than being available to the local inhabitants. It has been reported that the apple grown in Arunachal Pradesh is being sold in some markets of this region at the rate of Rs. 2/- only per kg. whereas the the apple imported from Kashmir sells at as high a rate as Rs. 16/- per kg. in the same market. Lack of adaptation of suitable post-harvest technologies for storage and packaging coupled with poor marketing facility, is the major factor responsible for this appalling situation.

Animal husbandry and fishery

Although a traditionally practised rural activity, the animal husbandry and fishery of this region have remained almost at static level, due to lack of adequate attention towards breeding and rearing with requisiste nutritional care. Whatever attention has been given to this field has mostly remained confined to cross breeding but little attention has been paid towards the nutritional need of the animal population. Though the average livestock and poultry birds population in this region is much above the national average, the yields of meat, milk and eggs are much below. The average yield of milk per cow in this region is only about half a litre against the all-India average of 3 to 4 litres. It has been established that among other things, the trace minerals like copper, cobalt and manganese which are essential needs for lactation and general health of cattle, are very much inadequate or absent in the diet available to the cattles of this region. The 'Cattle Lick Salts' containing essential nutrients, which have been proved to be very popular and are being used widely in other parts of the country with substantial increase in yields of milk and improvement in general health of the cattle, is yet to find requisite attention in the northeastern region.

Fish happens to be a major food item, next only to rice in this region, but the production of fish is less than half of the estimated requirement. Keeping in view the variable climate within the region and socioeconomic factors of the people, it is necessary to adopt different technologies for different areas in this region having an estimated 2,08,617 hectares of total cultivable water area for pisciculture. The ICAR has identified 13 important locally available fish species with high potential for propagation. Technologies are also available for simultaneous method of paddy and fish culture which generate as much income from fish as from paddy. What is needed is their rapid adoption and propagation backed by action oriented R & D depending upon locational factors and features.

Industry

In a sense the rural areas in the North-East are more industrialized than many of their counterparts in the country. The traditionally practised 'Eri' and 'Muga' culture and the handloom and handicrafts of this region bear testimony to this view. But the products of such traditional industries are now facing stiff competition from outside with urgent need for suitable technologies towards upgradation and improvement of technique, design and quality. Among the handicrafts, cane and bamboo products of this region occupy special position and enjoy unique reputation. While efforts are already existent for bringing about improvement and excellence in design and finishing of these products, no effort has yet been made to economically utilize the huge by-products, which in some cases constitute over 80% of the raw materials used in the handicraft industry.

Of late, awarness is afoot towards economic exploitation of surplus land for cultivation of various cash crops based upon which small scale rural industries may be easily operated with local skill. Need and suitability for cultivation of essential oil bearing and medicinal plants and extraction of oil/active principles therefrom are too well known to merit any elaborate mention here. *Java Citronella* introduced by the Regional Research Laboratory, Jorhat, has become very popular in this region, but its prospect is not as bright as it was initially. Technologies for commerical exploitation of other species need to be adopted and

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IIT, Madras, a giant force in innovative engineering

T.G. Nallamuthu

In this article the author delves deep to analyse what makes IITM a giant force in academic excellence, industrial research and consultancy. The faculty, the students, the administration, the continuous assistance from FRG Government and above all, the constructive link between the ex-students and the institute, all play their roles. The author is all praise for the industry-institute interaction towards technological breakthroughs.

WHEN A TOP EXECUTIVE OF PHILIPS, Holland visited some electronic units in the United States he was surprised to find, in key positions, many young technocrats from the Indian Institute of Technology, Madras (IITM). This surprise soon turned into curiosity and propelled Dr. P. Cramer, Sr. Managing Director and International Research Coordinator of Philips to visit IITM and learn at first hand the pre-eminent status of this Institute.

A great Institute

What makes this Institute of Technology so great that quite a few of the 300 and odd students get absorbed in industries all over the world and about 15 to 20 per cent go abroad for higher studies, eventually each and work in high-tech industries there ? A faculty of international repute, excellent technical and supporting staff, an effective administration and, of course, a brilliant student community, says Prof. L.S. Srinath, Director of IITM. The high flexibility of the examination schedule and the credit system at the Institute enable the students to achieve excellence in chosen fields.

IIT Madras is an advanced academic institution where innovative engineering begins. It is an institution that is dedicated to more than just a continuous generation of trained manpower, an institution that believes that high technolgy must ultimately walk out from universities and laboratories to the factory, the field and the home; an institution that is trying to bridge the gap between formal academic research and industrial activity.

The Indian Institute of Technology, Madras was established in 1959 as one of the five instituites (Bombay, Delhi, Kanpur, Kharagpur) Another one is to be set up shortly in Assam. The Federal Republic of Germany aided it both technically and financially to make it the largest West German-aided educational project in the world. Located in what was originally a deer park of about 700 acres, it is one of the greenest campuses in the country, still retaining the foliage and the deer population.

The major fronts

IITM works on four major fronts— teaching, research, industrial consultancy and continuing education. The academic curriculum of IITM leads to B.Tech., M.S. and Ph.D. degrees in as many as 15 disciplines. Besides engineering departments like Aeronautical, Chemical, Civil, Computer Science, Electrical, Mechanical and Metallurgical, the Institute also has advanced departments of Mathematics, Physics, Chemistry, Humanities and Social Sciences.

Links maintained

The widely diversified faculty which has been training personnel for leading industrial and academic institutions in the developed countries are continually in touch with their counterparts elsewhere. Eminent people from the industry serve as adjunct faculty bringing in their rich industrial experience to the classroom. Crowning it all, the 2000 strong Alumini Association with its headquarters at Houston, Texas which is something unique for IIT Madras provides a vital link between the past and the present students and faculty. Past students provide material and academic support (they have gifted $ 100,000 worth of personal computers). Whenever they come to India they visit the intitute and share their knowlege. Whenever existing students and faculty go over to the United States they provide all linkages and facilities. All this has provided the springboard for IITM's growth as a giant force in

academic excellence, industrial research and consultancy.

The scope

IITM has 12 departments, including laboratories and ten centres for advanced research equipped with advanced workshop facilities–laboratories that have extensive facilities for studies on vibrations tribology, acquistics, signature analysis, stress analysis, fatigue testing, compression testing, testing facilities for IC engines, gears, lubricants, turbo changers, high speed compressors, multi-storied structures, shell roof structures, underground tunnels, flow research and energy converting machines.

IITM also has a wide range of unique central service facilities that are open to other technical institutions and industrial organisations like Regional Sophisticated Instrumentation Centre, Ocean Engineering Centre, Central Electronics Centre, Materials Science Research Centre, Fibre Reinforced Plastics Research Centre and Centre for Continuing Education which periodically conducts courses for industrial personnel. It has a Computer Centre which has facilities for hardware architecture, network hardware and software, computer aided design and computer aided manufacture. With suitable assistance provided both by the Government of India and the Government of the Federal Republic of Germany, the Institute has been able to acqurire a new Sophisticated Computer system. These are being used in complicated fields like Forensic Science, Satellite Imagery and Offshore drilling programmes.

There is a Centre for Industrial Consultancy and Sponsored Research set up in 1973-the first of its kind in the country—providing a vital link between the Institute and the Industry. This Centre makes IITM's facilities available to other educational and industrial organisations as well as exposes its faculty to the contemporary problems of the industry.

The Centre has taken up several sponsored research projects and developed more than 20 products and patented them for commercial exploitation. Products fabricated range from tiny instrument gears to large size dies for rocket moulds. The Materials Science Research Centre at IITM is updating research on super conductivity and has come up with substitute compounds with super conducting properties.

FRG's vital support

The Institute continues its collaboration with the Federal Republic of Germany through exchange programmes and collaborative research projects. In a recently signed agreement, the Federal Republic of Germany is extending support for augmenting and modernising the facilities in the areas of Material Sciences, Catalysis, Production Engineering and Electronics Centre.

Other activities

As part of Continuing Education Programme, IITM organises a number of short term courses, seminar and workshops in specialised areas of science and engineering for scientists and engineers from industries and research and development establishments. A large number of such courses are in inter-disciplinary and frontier areas and can be tailored to the needs of specific industries. In order to meet specialised manpower need of an industry, the Institute also organises masters level programme suited to the specific needs of an industry.

The Institute has a thousand under-graduate students and about nine hundred post-graduate students and research scholars. A highly flexible system of electives and credit system whereby a student can find the right equation for his study pursuit makes IITM one of the foremost institutions of its kind in the world. Students of IITM are readily absorbed in industries at home and abroad. While 25 per cent of the students go in for higher management studies in India and abroad another 25 per cent find employment overseas. The others man key positions in industry at home bringing about ever-growing industry-institute interaction towards technological breakthroughs. ☐☐☐

Telephones on demand by 2000 A.D.

A Perspective Plan has been prepared to provide telephones practically on demand by the year 2000 A.D. It has been estimated that this will call for increasing the number of Direct Exchange lines to about 190 lakh by the turn of the century, from the present 38 lakh. It has further been estimated that this will call for investment of the order of Rs. 50,000 crore on current prices.

The telecommunication network being an integrated network, many of the schemes extend beyond the territorial limits of the state. Therefore, the allocation of budget is made project wise. An outlay of Rs. 4010 crore has already been fixed by the Planning Commission for the Seventh Five Year Plan (1985-90) for expansion of telecommunication. During the first 3 years of the Seventh Five Year Plan (1985-88) about Rs. 3,300 crore has been spent.

A comprehensive programme has also been prepared for setting up earth satellite for improving the communication system in the remote areas of the country.

57 earth stations for remote areas have been planned to be set up during the Seventh Five Year Plan. Of these 8 earth stations in the remote areas had been commissioned upto March 31, 1988. Another 29 earth stations in the remote areas of the country are planned to be set up during 1988-89. ☐

Land resources : A story of colossal mismanagement

B.B. Vohra

Absence of considered land policy, non-allocation of sufficient finances and lack of organisational arrangements have resulted in the colossal mismanagement of India's land resources and the ensuing abysmal poverty of its masses. In this article, the author pleads for reordering of priorities in this field so that the continued ignorance and apathy with which this problem is viewed are done away with and optimum land management achieved for the betterment of India's teeming millions.

IT CANNOT BE DENIED THAT IT IS THE colossal mismanagement of India's land resources which is mainly responsible for the country's abysmal proverty. Of the 264 mh of land which possess any potential for biotic production, as many as 175 mh were reported to be degraded to a greater or lesser degree in 1980. And of these 174, at least 90 mh are so degraded as to be almost completely unproductive. Denudation and soil erosion affect around 153 mh out of the 175 while water-logging, salinisation and other ills account for the remaining 22 mh. If the country is to be saved from recurring and increasingly severe floods and droughts as well as from the growing depletion of the productive capacity of its land resources, the stupendous soil and run-off losses it suffers must be arrested by massive programmes aimed at the natural regeneration of its non-agricultural lands by protecting them against unrestricted grazing. Soil and water conservation works must also be undertaken on all eroding lands irrespective of whether these are under agricultural or other uses. Such programmes must indeed become the focal point of all efforts at rural development and be carried out with the active collaboration of local communities in the shortest possible time.

A compact and time-bound programme needed

The amelioration of waterlogged and saline lands, the stepping up of command area development programmes designed to improve the inexcusably low productivity levels of some 20 mh of canal irrigated lands, the closing of the gap of around 6 mh between the potential "created" by big irrigation projects and the potential actually "utilised", the protection of good agricultural lands against diversion to urban uses, the maintenance of the fertility of over-worked agricultural soils and the vigorous conservation of whatever natural forests are still left to us must also figure prominently in a comprehensive programme of land management. Unless such a programme is formulated and implemented as a matter of the highest priority, the very survival of the country as self-respecting nation will be threatened.

Thanks to a pervasive "resource illiteracy" there is as yet little appreciation of these matters. As a result there is—41 years after independence—still no considered policy for better land management, no suitable financial allocations for this purpose, and naturally enough, no organisational arranagements for achieving it. This is a situation fraught with the most dangerous consequences and must give cause for the utmost concern among all those who are interested in the country's future.

The re-ordering of priorities in this field is, however, not going to be an easy matter, considering that all efforts in this direction in the past have proved to be unsuccessful.

Suggestions over-looked

It was as far back as September 1972 that pointed attention was first drawn to the vital importance of the proper management of the country's land resources in an exhaustive paper entitled "A Charter for the Land", which was subsequently published in "The Economic and Political Weekly" of March 31, 1973. This paper described the ills that our land resources suffer from and suggested how these should be treated. It stressed the need—which still remains unmet—for creating a more reliable data base for all matters concerning our land resources and for bringing about a greater

wareness among the people regarding the importance ! better land management. It also pleaded that ppropriate mechanisms and organisations should created at the Central, State River Basin and local vels for monitoring and maintaining the health of our nited and irreplaceable soil resources. As it appened, this paper came to the notice of Mrs. Indira andhi, and she reacted very positively to it, particularly perhaps the most important and far-reaching of its commendations namely, that there should be an thority at the Centre to act as a focal point for all atters relating to the assessment and management of r land resources. Mrs. Gandhi considered this matter be so urgent that she asked her Minister of Planning examine within a period of two months as to how the oposed Commission should be set up. The views that e expressed on this subject are worth quoting as they as relevant today as the day on which they were itten nearly 15 years ago:

"Based on our experience of soil erosion, droughts and floods and their increasing financial liability, a large part of which has to be borne by the Centre, this paper argues in favour of the creation of a Central Land Use Commission. I am in broad sympathy with its approach and feel that we can no longer afford to neglect our most important natural resource. This is not simply an environmental problem but one which is basic to the future of our country. The stark question before us is whether our soil will be productive enough to sustain a population of one billion by the end of this century with higher standards of living than now prevail. We must have long-term plan to meet this contingency."

Events however proved that these ideas were very ich ahead of their time and encountered great istance at various policy-making levels. Ultimately le emerged from Mrs. Gandhi's initiative except a ective to State Governments that they should set up ate Land Use Boards under the chairmanship of ief Ministers. But this was an insignificant gain cause in the absence of an apex body at the Centre to ovide the requisite leadership and financial backing a meaningful programme of land management, these ards have remained largely on paper.

The N.D. Tiwari Committee on the Environment 80) also considered questions relating to land nagement and came to the conclusion that in order to l with the massive problems of land degradation ed by the country, it was necessary that a Central nd Commission should be set up to serve as "a icy-planning, coordinating, and monitoring agency" all issues concerning the health and scientific nagement of our land resources, and should function part of the proposed Department of Environment. wever, even this recommendation failed to find eptance.

Plans side-track this issue

gain, the 6th Plan document of 1980 contains, in its pter on the Environment, a most lucid account of the nature and consequences of land degradation and minces no words in describing this threat to the economy:

"The losses which the country is bearing on account of the continued degradation of its land resources are of staggering dimensions and constitute one of the important threats to our economic progress."

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"The country can hope to achieve a continuous improvement in agricultural productivity only if the problems of land degradation are tackled with the utmost vigour. Such an effort though gigantic by any standards is, however, inescapable if the country's agricultural future is to be assured. Considering that even after all possible steps are initiated immediately it will be years before results begin to show and that further massive damage will unavoidably continue during this period, there is absolutely no room for complacency on this front".

However, these fine sentiments were not matched by any significant allocations for better land management, and were thus only in the nature of lip service to the cause.

Our world have expected that the 7th Plan would take up the thread from where it had been left by the 6th Plan but surprisingly the 7th Plan document does not contain even a proper write-up about the problems of land management, let alone any enhanced allocations for tackling them. It is almost as if the problems which loomed so large in 1973 and 1980 had somehow disappeared by 1985 and as if the persons who had perceived them had suffered from hallucinations.

Present stand encouraging

The story, however, is not yet quite complete. The present Prime Minister warned the country, in his address to the nation on 5th January, 1985, of the serious ecological and socio-economic crisis which it was facing. He quickly followed up his broadcast by constituting three new bodies—the National Wastelands Development Board, the National Land Use and Conservation Board and an apex body called the National Wasteland and Land Use Council which has all Chief Ministers as its members and over which the Prime Minister himself presides. While the NWDB was charged with the responsibility of mounting a massive afforestation programme with the help of the people, the National Land Use and Conservation Board was expected to formulate a national policy and a perspective plan for the conservation, development and management of the land resources of the country.

Even these important initiatives have however not yielded the intended results, basically because of the continued ignorance and apathy with which the problems of land management are still viewed by the country's establishment. While the NWDB has pursued a one-point programme of creating plantations and made some gains in this limited field, the NLUCB has more or less remained a paper body and has not held a meeting for nearly two years.

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Are agricultural support prices for 1988 realistic ?

Surinder Sood

The support prices of paddy, coarse cereals, pulses oilseeds and cotton were announced in Parliament on May 4, 1988. The author here analyses the increases and feels that the announcment, though timely, would be meaningful if the next monsoon turns out to be normal. He welcomes the step to designate the NAFED as the central nodal agency to undertake purchases at the minimum support prices.

THE HIKE IN THE SUPPORT PRICES of paddy, coarse cereals, pulses, oilseeds and cotton for the next kharif marketing season announced in the Parliament on May 4, 1988 are likely to be widely welcomed. Though it may not fully satisfy the demand of all sections of the farmers, the increase is by no means substantial. It varies from Rs. 10 a quintal for paddy and coarse grains to as much as Rs. 60 a quintal for sunflower seed and a particular type of cotton. The price rise for pulses is a hefty Rs. 35 a quintal and for groundnut Rs. 40 a quintal. The statutory minimum price of yellow soyabean has been raised by Rs. 20 a quintal and that of black soyabean by Rs. 15 a quintal. In the case of cotton, the increase ranges from Rs. 50-60 a quintal, depending upon the quality and staple length.

Timely step

Significantly, the increase in the prices has been preceded by a 7.5 per cent discount on urea prices. Equally singnificant is the fact that the announcement of the new prices has been made well ahead of kharif sowing season. It can, therefore, be expected to have the desired influence on the crop production by allowing sufficient time to the growers to plan for their crops. While announcing the new prices, the Agriculture Minister, Mr. Bhajanlal, had expressed the hope that it would enthuse the farmers to achieve the desired increase in productivity and production of both food crops and oilseeds. In the case of cotton, the objective had been to remove varietal imbalance, especiall[y] between demand and supply for medium staple cotto[n] varieties. The move is intended also to provid[e] adequate quantity of cotton to the exporters of cotto[n] and cotton yarn.

Increase, how muc[h]

On the face of it, the increase of Rs. 10 a quintal in th[e] procurement-cum-support prices of paddy may no[t] appear to be much, particularly if it is viewed against th[e] general price rise of agricultural commodities an[d] manufactured items in the post-drought period. But th[e] increase would indeed look significant when viewe[d] against the price hikes effected in the past several years. For instance, the increases given in the support price[s] of paddy had only been of the order of Rs. 4 to Rs. 5 [a] quintal since 1983-84. The year 1983-84 had been th[e] sole example where the prices were raised by Rs. 1[0] quintal in one stroke.

Another significant departure this year has been t[o] enhance the differential between the procuremen[t] prices for common, fine and super fine varieties o[f] paddy. While the difference earlier was only Rs. 4 [a] quintal, it has been raised to Rs. 10 a quintal now. Thi[s] is bound to encourage the growers to go in for bette[r] quality paddy which has a bigger demand in the marke[t]. This will also indirectly ensure accrual of better qualit[y] rice to the Central grain pool and, in turn, the supply o[f] good quality grains from the public distribution system.

The fixation of support prices is a politically sensitiv[e] albeit economically important issue. The final decisio[n] therefore, at times differs from the recommendation[s] made by the Commission for Agricultural Costs an[d] Prices on purely economic considerations. This yea[r] however, the Commission's recommendations seem t[o] have been accepted in full, without any alteration.

In some cases, stee[p]

The increase in the support prices of oilseeds, pulse[s] and cotton, though fairly steep, would in reality be onl[y] a notional one. The ruling market rates for all thes[e] commodities are far higher than what the governmen[t] has come forward to offer. The impact of the increas[e] will thus be not strictly economic but mostly psycholog[ical]

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Eighth plan strategy and objectives

Nitya Chakraborty

In this article the author describes the strategy and objectives of the 8th Five Plan. While decentralisation of planning is stressed as the best strategy, the objectives include near total employment and eradication of poverty. More rural programmes for creation of more productive employment opportunities is the proposed means for the attainment of the twin objectives.

HE PRIME MINISTER, MR RAJIV GANDHI'S scussions with the Planning Commission Members in st March marked the first phase of the Government's ercise to formulate an appropriate strategy for the ghth Five Year Plan, the period of which begins on st April 1990.

Plan objectives

The eighth plan strategy has assumed special portance in view of the fact that the Government has t before the nation the goal of removing near total employment and eradication of poverty by the year 00 A.D. This means that during the eighth and ninth an periods, the planning strategy will have to be rmulated and implemented in such a way that the jectives set out by the Prime Minister can be hieved.

The objectives in detail include bringing down the verty line below five per cent of the population, nditions of near full employment, health care for all, ovision of elementary education to all children upto e age of 14, removal of structural deficiencies in ckward areas and graduation of the Indian industry m the existing phase of high cost-low productivity to cost-high productivity level.

Planning to be decentralised

While discussing the methodology for the Eighth n, Mr. Rajiv Gandhi had said that the district plan uld be the core of the Central Planning and the Comssion would have to develop and operationalise thodology of planning at district and state levels. He had emphasised that the objective of the District Planning would be to maximise productive employment by taking into-account the social indicators like education, health care, family planning and infrastructural works The Prime Minister had underlined that the aspirations of the poor would have to be taken into account while formulating the programmes and the non-governmental agencies would have to be involved in the planning process.

On the basis of the observations made by Mr. Rajiv Gandhi, the Planning Commission has decided to set up a task force to prepare the operational model for district planning so that the new model can be applied from the beginning of lthe Eighth Plan itself. Since some work on the lines of this model has already been done in Uttar Pradesh and Gujarat, the planners have indicated that a beginning can be made from these two states itself.

Emphasis on rural programmes

The Prime Minister's emphasis on the rural poor oriented planning stems from the fact that the Government has come to realise that the poverty eradication programmes have suffered a setback as a result of the severe drought in 1987 and consequent fall in agricultural production. At the beginning of the Seventh Plan, it was estimated that over 22 crore people in rural India and over five crore in urban areas lived below the poverty line. In terms of percentages, the poverty ratio was 39.9 per cent in rural areas and 27.7 per cent in urban areas in 1984-85. The Seventh Plan aimed at bringing down the poverty ratio from an average of 36 9 per cent to 25.8 per cent during the Seventh Plan period.

The rural poor consist largely of the landless, marginal and small farmers and other marginal workers But the distortions which have taken place in the agricultual sector in the last three years of the Seventh Plan have affected also the poverty eradication programmes. A recent official analysis of the rural programmes has shown that a large number of marginal farmers are becoming available for and primarily dependent on wage labour. In the overall employment structure, a decline has taken place in the proportion of self-employed and increase in the proportion of casual labour. What is more revealing is that in the last three years, not only has there been a shift from rural to urban areas, but more strikingly, within the rural areas, there

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Mass media--harbinger of social change

B.N. Sarangi & A.P. Kanungo

In this article, the authors have highlighted the role of mass media in the process of social development. In their view the primary aim of the media is to feed information to regulate the level of social tensions and to raise the level of aspiration. Therefore, there should be a proper blend of educative/informative and entertaining programmes according to them.

THE NATIONAL AND GLOBAL DEVELOPMENT have now become feasible through mutual co-operation and exchange of ideas and approaches, Communication has been recognised as an important means to this end. Different forms of communication have enabled the individual members of the society to know people of other countries and to be known by them and others. Communication generally assumes two basic forms—the traditional form of face to face contact and the impersonal form. At present the communication process is designed in terms of its' contributions to the development of the society. The ultimate purpose of all developmental communication is to influence the behavioural complex of the individual members of the society. The manner in which a communication informs, guides and entertains, determines the quality of the message. In developing countries like India resources are scarce for face-to-face direct interpersonal communication. It will be difficult to cover fantastically large heterogeneous audience of 68.5 crore with literacy figure around 36.23% and the unprivileged mass of 37% below the poverty line through the traditional form of communication. This situation underlines the need and relevance of mass media which can very well take the responsibility of communicating with the mass. The late Professor Harold Adams Innis of Canada once formulated the history of the changes in society based on the major changes in methods of communication. Innis believed that when oral communication was progressively supported by cuneiform, papyrus, paper and printing, dramatic societal changes resulted from each. This observation holds good for our country after the addition of Television in the communication network and people are now viewing TV with avid interest. The UNESCO while determining the yardstick to measure the sufficiency or otherwise of mass communication facilities in developing countries has suggested that every country should aim at providing for every 100 persons ten daily news papers, five radio receivers, two cinema seats and two TV sets. The facilities of mass communication in India can be analysed from the information given below.

Reach of media

1. Radio	The total number of transmitters is 170 covering 98% of total population and 79.81% of the total area.
2. Television	The total number of TV transmitters is now 255 covering 70% of the total population.
3. Visual media	At the end of 1985-86 there were 12,680 cinema houses with seating capacity for 7.5 crore persons per week. Approximately four crore people from rural population are getting facility of being exposed to films.
4. Press or print media	The total number of newspapers comes to 21,784 out of which 1,609 are dailies, 111 bi-weekies, 6,489 weeklies and 13,784 are other types of publications The total circulation at the end of 1984 comes to 6,11,47,000 copies.

Social change

Social change may be defined as the process by which discernible significant alteration occurs in the structure and functioning of a particular social system. The change in social structure essentially indicates the change in inter relationship or arrangement of parts; social interactions or social role playings are the theme of the social life. As Kuppuswamy observes "The main ingredients of social life are the interactions between persons who are in role relations to one another and whose interactions are governed by sanctions, norms and values". For a layman social change means some change in social behaviour, social structure and social

ural values. Change is inevitable but the term " itself is neutral. The magnitude of this of a rural society can be measured in a um, varying from maximum reluctance to chang to maximum readiness to change, Now the direction of social change is an important area of interest to the present day sociologists. The sociologists can very well determine the concrete situations conducive to desired change, the effect of mass media on the individual members should be cumulative.

All social change is accompanied by tension, but when change is accomplished, tension is often relieved. the chief aim of mass communication is to feed information to regulate the level of social tensions like discontentment or discomfort and to raise the level of aspiration. This is a deliberate effort by the mass media to achieve socio-economic transformation.

Social interaction

Social interaction refers to the dynamic interplay of forces in which contact between persons and groups results in a modification of the attitudes and behaviour of the individual members. The different forms of social interactions which are influenced by the information delivery systems of the mass media may be competition, co-operation, conflict, accommodation and assimilation. Dynamic changes are deliberately infused in these social processes to modernise the society without deterioration of human values. The information given by the mass media affects primarily the individual members in the following ways:

Shaping opinion

The opinion of an individual on a particular aspect of man's living affects the decision-making process. Opinions are also helpful in formation of productive attitude for national development. These opinions in later part affect the group norm. But mass communication is not much effective in changing attitudes that are strongly held.

Widening horizons

The nature of mass communication is very rapid and publicly visible. People see and hear new things about different places where they had never been. The people of a developing country can well understand how people of other developed countries live, and consequently look at their own lives with new insight.

Technological change

The technological change has two aspects i.e. information and skill. In the recent past the television and films have been found effective to show how to do a job. The skill training by mass media is superb on vocational fields like Agriculture, Veterinary Science, Fishery, Cottage Industry and Health. In economic and social development, change often begins with agriculture.

Eliminating social evils and preserving human rights

Natural resources and human forces are sometimes not properly mobilised due to some social evils. For example, untouchability and low status for women are the two social evils which prohibit the interaction between castes and sexes etc. By informing those neglected mass about human rights, social justice can be established and Gandhiji's dream of a castless and classless society can be realised. The primary human rights like equality of opportunity and equal distribution of national resources push the individuals for productive competition, co-operation and accommodation for their personal growth.

Reinforcement of human values

The people of India have very rich heritage and great sons of this country got world wide recognition for their contribution to the promotion of human values. Destabilisation of human values and westernization of our culture through mass media are two important concerns which are often debated at different levels. In early twentieth century western social elements were believed to affect our social life through mass media But now it is observed that the changes taking place in our day-to-day living are rational and judicious. This phenomenon is known as acculturation, and no society is free from this. The gap between western and eastern culture will be reduced and commonness will be established for greater international prosperity. The contribution of Television to this aspect through TV serials needs special mention.

Raising aspirations

The tendency of the modern man for a comfortable life is a clear indication of aspiration explosion. The information on good housing, food, clothes, medicine, education etc. have sensitized the people and helped to raise their aspirations.

Effects

The effects of mass media may be classified into two broad categories (i) direct effect (ii) indirect effect. The effect is direct where change occurs due to the direct contact of individuals with the mass media. It is mostly observed with peers or opinion leaders. The opinion leader receives the information and applies it in his situation. The role of opinion leader in this context needs special emphasis. Opinion leaders are most often members of the social system in which they exert their influence. Those members who do not get information direct from mass media get second hand information from the opinion leaders and are thus influenced. This is known as indirect and secondary effect of mass media. The individuals of medium income group have more of public contact and play the role of opinion leader in rural areas.

Reviewing the effect

The critics of mass media have complained for decades that entertainment is emphasized and educational programmes ignored. But programme analysis reveals a shift in favour of educational programmes. The argument of intellectuals to provide

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Plan to provide home for shelterless

Yojana Correspondent

TO PROMOTE ACCESS TO SHELTER for the houseless and the disadvantaged groups including scheduled castes and scheduled tribes, freed bonded labourers, rural landless, widows, victims of natural calamities and all other economically weaker sections, and to introduce appropriate schemes providing for groups/hostel/dormitory/night shelter type of accommodation— are the major thrusts of the National Housing Policy announced by the Central Government very recently. This is the first time a national housing policy has been formulated.

The policy document prepared after extensive discussions and consultations with the State Governments, experts, various organisations, individuals and city planners, outlines main goals to be achieved by the turn of the century and enunciates the objectives, priorities and main target groups which it intends to focus on. It also envisages appropriate strategies to be adopted for promoting the sustained development of housing. The Policy also recognises the need to bring forth requisite legislative amendments to accelerate housing activity in the country.

Objectives

The main objectives of the policy would be to motivate and help all people and, in particular, the houseless and the inadequately housed, to secure for themselves affordable shelter through access to land, materials, technology and finance. It also aims at encouraging investment in housing in order to achieve a sustained growth of the country's housing stock and its proper conservation, renovation and upgradation. To improve the environment of human settlements with a view to raising the quality of life through the provision of drinking water, sanitation and other basic services is also aimed at.

Strategy

The objectives are sought to be achieved by making available developed land at reasonable rates for housing and providing security of tenure to households both in rural and uraban areas. A viable and accessible institutional system for the provision of housing finance will be developed and an investment in housing for rental purposes created. Making available standard building materials and components at reasonable prices and improving and upgrading construction skills beside giving impetus to cooperative and group housing activities would also form a part of the strategy. The relevant laws and regulations wherever necessary would be modified with a view to removing constraints to housing activity.

Housing financ

The policy document recongnises easy access institutional finance at affordable rates as a pr requisite for accelerating the tempo of housing activi and stresses the need to develop a specialised housi finance system, as an integral part of the nation finance system to increase the flow of funds for t creation of new housing stock as well as for t renovation, upgradation and expansion of the existi housing stock in the rural areas, semi-urban and urb areas. The National Housing Bank when set up wou mobilise resources for the housing sector and promo housing finance institutions both at local and region levels. It would provide financial, technical a administrative assistance and regulate the working housing finance institutions at all levels.

Fiscal incentives provided under the laws relating taxation of income, wealth, gifts etc. would rationalised to channelise saving into housing fina institutions and promote investment in housi activity. For those not eligible for such incentive alternative incentive schemes would be devised.

It is suggested that with a view to concretising t policy and ensure its effective implementation withi defintte time-frame, perspective plans of acti based, interalia, on the estimates of housing nee particularly of the identified priority groups and t resources which could be mobilised for meeting the over a period of time, would be periodica formulated in consulation with the State Governme and other agencies concerned.

Minimum housing norm

According to the guidelines suggested formulation of housing scheme, the size of the plot economically weaker section families in rural are should not be less than 85 sq mts. with a provision secure built-up accommodation of not less than 20 mts. with adequate arrangements for essential servic like potable water supply and sanitation. In urban are for economically weaker section families, the size of t plot should not be less than 30 sq. mts. which may reduced to not less than 25 sq. mts. in metropolit cities, with a provision of secure built up accommoc tion of not less than one living room, a separate cooki space and low-cost sanitation toilet.

For hilly terrains and difficult and inaccessible are appropriate minimum housing norms would be l down by the States and Union Territories concern keeping in view the local conditions. All these minim

housing norms would be periodically reviewed/and progressively improved.

The rural housing strategy would lay special emphasis on provision of house sites to scheduled castes and scheduled tribes, freed bonded labour and landless labourers alongwith financial assistance for house construction to them on suitable loan-cum-subsidy basis. Accessibility to institutional finance for upgradation, expansion and renewal of existing houses and also strengthening the supply and delivery system of essential building materials and components not easily available locally are provided for in the policy. Research in and development of building materials based on local resources and promotion of their produ-tion and use would also be emphasised.

Legal aspects

The policy document points out to the need to review the entire gamut of legal provisions contained in various Acts. Amendments to various laws relating to land tenure, land acquisition, land ceiling including municipal regulations relating to house building, apartment ownership and other connected laws would be initiated and new legislations enacted, wherever necessary, with the cooperation of the State Governments to subserve the objectives of the policy.

The document highlights the major role which the voluntary agencies and informal sector would be called upon to play as motivators and catalysts in galvanising the efforts of the community, mobilising household savings, acting as intermediaries between the local community and official agencies in provision and distribution of building materials and also in the development of human resources.

Training

The policy document points out that special efforts will be made to upgrade the skills and improve the working conditions of women construction workers. It also envisages greater involvement of non-governmental organisations in the training of construction workers, both in the formal and informal sectors.

Slum upgradation

Improvements of slums forms one of the thrusts of the new policy. The Government proposes to confer tenurial rights on slum dwellers at reasonable rates and relocate slum dwellers and squatters to the extent possible wherever conferment of tenural rights in respect of the land occupied by them is not feasible. The Policy also seeks to provide easy access to institutional finance for upgradation or redevelopment of their dwelling units.

Clearing backlog

The total backlog of housing needs as on March, 1, 1981 was estimated to be 23.3 million units—16.3 million in rural areas and 7 million in urban areas. The bulk of this backlog seeks to clear the existing as well as future backlog by the year 2001. It emphasises the need for substantial step up in maintenance, upgradation and improvement of the existing housing stock as well as construction of new dwelling units at a much higher rate than the present rate. For this purpose, the investment in housing will have to be increased by 30-35 per cent over the present level.

To meet the emerging demands and needs of the changing socio-economic conditions of the people, the policy has been sought to be made dynamic by ensuring continuous evaluation and modification of programmes and schemes on the basis of the feedback and experience. ☐☐☐

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is a shift from agriculture to non-agriculture activities. It is in this context that the question of laying greater emphasis on the creation of productive employment opportunities in the rural areas has come and this programme is expected to be the key element in the district planning during the Eighth Plan period.

Mr. Rajiv Gandhi has underlined that for the Eighth Plan, agricultural planning must be built upwards from the District level. District level planning must take into account local factors, local conditions, local priorities, local problems and local potential including technological resources. He has emphasised that the national agricultural plan should constitute a summation of these district plans, cast within the framework of national priorities and national resources. According to him, as a result of this approach, much more output from a given volume and pattern of resources will be available and this will lead to much higher growth rates compared to the past.

Role of Planning Commission

Mr. Rajiv Gandhi has also asked the Planning Commission to play an enlarged role in terms of certain crucial policy formulations in some key areas like fiscal, monetary, industrial and foreign trade. He has stressed that the private sector will have to be involved more actively in broad policy formulations in some key sectors In fact, the Prime Minister has underlined that the Planning Commission will have to play a catalytic role in the developmental process during the eighth plan period

So long the Planning Commission has been doing broad policy papers of recommendatory nature and these are sent to the concerned administrative ministries for consideration before they are placed before the cabinet. Mr. Gandhi has desired that the Commission will now be working on final policy formulations in consultation with the concerned administrative ministries for some thrust areas and these will straightaway be considered by the cabinet. This means that one tier at the decision making level will be removed and the policy formulations will be less time consuming. ☐☐☐

Forests—protectors of environment

Awanish K. Singh

Extensive felling of trees for fuel, population explosion (both human and cattle), shifting cultivation and deforestation have tilted the well-balanced ecology thereby posing a threat to the environment. In this article the author pleads for a better deal to our forests and concludes suggesting positive measures for arresting deforestation.

FORESTS NOT ONLY PROVIDE US our basic needs of food and shelter but are also responsible for greater consequences towards the human being, in the form of influencing the global environment. They supply clean air by absorbing carbon di-oxide and other harmful gases— a hyproduct of industrialisation like sulphur di-oxide, hydrogen fluoride, ozone, hydrogen chloride and dust particles like cement and coal dust etc. These forests work like speed breaker to the surface run off and absorb the water to be released later on in the form of streams. It is estimated that the country's total precipitation in the normal monsoon conditions works out to 400 million hectare metres. Out of this only 150 million hectare metres reach the soil; and out of this this only 40 million hectare metres reach the ground water which is used for irrigation and drinking purposes all through the year later on. The loss on account of surface run-off comes to a mind boggling figure of 180 million hectare metres and therefore it is that forest cover in a watershed is the cheapest and best method of water storage in space in a country where the whole economy revolves around the monsoon.

Unfortunately the forests-one of the most important ecosystems of the world—are under threat of destruction The problem is more acute in tropics which inhabit most of the underdeveloped and developing population of the world. According to a study 20 hectares of the forests are lost every minute or 20 million hectare every year the world over most of which is taking place in the tropical countries. At this rate tropical forests of the earth will not last more than 30 years. According to a U.S. projection the forest land in the developed countries will decrease 0.5% by the year 2000 A.D while the decrease will be as high as 40% in the underdeveloped world.

Reasons behind deforestation

Let us examine the pace of deforestation/diversion of the forest land for non-forestry purposes in India, At the time of independence, recorded forest area was 75 million hectares or 22.7% of the total land mass of 329 million hectares of the country. According to the recent studies done by the National Remote Sensing Agency and Forest Survey of India about 67 million hectares land is under forests which means about 19.5% of the total land is under forest in the country. But the forests with minimum 40% density stand only over 10% (which is referred as 'closed' forests) 8% is 'open' forests, 0.12% mangrove forests and 1.10% coffee plantation. Loss of forest area for other purposes is estimated at 1.5 million hectares every year in the country. Since independence about 4.3 million hectares is lost on account of irrigation projects, industries and power projects only. Broadly speaking the main reasons for the loss of the forest cover are·

- Extensive felling of trees for fuel wood.
- Economic requirements which necessitate exploitation of the forests for profit.
- Shifting cultivation and other unscientific and inappropriate agricultural/horticultural practices resulting from growing food requirement of the hungry millions.

The population explosion-both human and cattle-that has taken place in the country has created a deep economic and social crisis resulting in the increasing presssure on biological system beyond its capacity to sustain, causing adverse effect on the environment. Population has grown from 361 million in 1951 to 668 million in 1981 and is estimated to be 700 million at present and is expected to touch one billion mark by 2000 AD. Similarly the cattle population which was 237 million head in 1972 is expected to touch 398.22 million head in 1992 and will reach 398.22 million head in 1992 and will reach all time high 437.96 million head by the turn of the century.

The growing need of fuel, timber and fodder has created a situation where we are face to face with ecological disaster. The gap between the demand and

supply is widening, creating a situation of distress and the poor people have no alternative but to cut more trees which amounts to eating away the capital instead of the interest.

At present the country's fuel wood consumption is 125 million tonnes. Out of this only 36 million tonnes come legally from the Government forests; rest are collected as matter of right by the people or pilferers from forests which go unrecorded. The demand is expected to reach 200 million tonnes by 2000 AD. Inspite of availability of other sources of fuel, fuel wood forms 68.5% of the total energy budget of the rural population despite its being of low calorific value and thermal efficiency. To understand how much forests contribute to the national economy on this count only it will suffice to know that if we want to arrange alternative energy source for 125 million tonnes of fuel wood at present market rate it would cost us no less than Rs. 4000 crore. Despite all this, the fact remains that per capita consumption of fuel wood in India is as low as 0.290 M and ranks 77th in the world, but tops the list with maximum production of fuelwood in the world.

Forest products

Apart from fuel wood, timber and paper pulp are other products which come from the forest, the demand for which is increasing each successive year. Present consumption of timber is about 20 million tonnes which is expected to reach about 32 million tonnes by the year 2000 AD. The use of timber and other related products are linked with the economic development and rising standards of living. Although paper consumption in the country is as low as 2 kg. per capita as compared to even developing nations as Turkey 13 kg., Brazil 26 kg., Malaysia 37 kg. But the consumption of timber at present for pulp wood is 5 million tonnes. As the literacy grows in the country, use of paper and news print is bound to increase. Any slackness will adversely affect the growth of literacy, communication and media. It is anticipated that requirement will be about 15 million tonnes of paper pulp at the end of the century which is a very modest estimate. It only shows three fold pressure on the existing forest resource if we could stop further deforestation.

With only this much of the forest left with us we are sustaining 13% of the world's cattle population. In addition to meeting the nutritional requirement in the form of milk and milk products, meat and mutton these animals are used in ploughing, cart transport, oil extraction, cane crushing, irrigation and other related activities of traditional agriculture. The proportion of the animal energy is as high as 50.8% to the total energy consumption in the agriculture sector. Apart from this, these animals are the source in the work of leather, bones etc. Although the importance of animals in our rural socioeconomic milieu cannot be overemphasised, these animals are being sustained virtually on Government land of which about 20 million hectares is forest land open for grazing turning half of it into degraded forests. Even if one hectare of grazing land is considered for one cattle than we need about 400 million hectares of grazing land which is more than the land mass of the country's 329 million hectares !

Jhum

The third major reason for the loss of forests is age-old, primitive form of agriculture, i.e. shifting cultivation or 'Jhum'. This practice is prevalent in the areas which are predominantly tribal. In this form of agriculture the forests are cut and burnt to add nutrients to the soil for raising coarse grain. After few years of cultivation the shifting cultivator or 'Jhumiya' moves to another area leaving the unproductive land devoid of any vegetal cover to the vagaries of the natural forces which only accelerate soil erosion and degradation of otherwise rich land. About 95% of the 'Jhumiyas' or shifting cultivators are concentrated in the seven States of the North-Eastern India, Orissa and Andhra Pradesh totalling about 607576 families. According to a study done by the Task Force on shifting cultivation in the Ministry of Agriculture, Govt. of India, in 1983, 14660 sq. km. forest area is under shifting cultivation at one time or other in the North-east India alone which constitutes 5.7% of the total geographical area of the region. Annual area under shifting cultivation is 3865 sq. km. or 1.5% of the geographical area of the region Because of the limited land and mounting pressure of the population the cycle of the shifting cultivation is reduced from 10-12 years to 3-4 years at present. This reduction in the rest period has adversely affected the soil fertility and increased the vulnerability of the soil to erosion.

Prevent soil erosion

Loss of forest because of any reason is detrimental to the healthy environment. Most pronounced effect is the soil and moisture loss. In the face of perpetual flood and drought importance of vegetal cover is being realised in the country with each passing day especially in an economy which is still agriculture based and no change in the near future is in sight. We ought to look after the welfare of the agriculturists' gold i.e. soil. Soil is the medium in which plants grow. It is the store house of valuable nutrients, minerals required for growth and development of the plant and which ultimately comes to us. Therefore there is a food chain in the ecosystem and human being is a part of it. After death and decay, the same nutrients and minerals again reach the soil and the recycling of the element is complete. But it is this chain which is being broken by soil erosion. The very basis of life is being wasted. It was estimated in 1972 that each year 6000 million tonnes of soil is lost which has reached today 12,000 million tonnes which is equivalent to 2.5% of the total land mass. In the form of loss of Nitrogen, Phosphorus and Potash (NPK) it comes to staggering figure of Rs. 20,000 million or at modest rate of production 50-60 million tonnes of food grain. Lest we forget, it takes about 400 years to form 1 cm. thick top soil. The other effects of soil erosion are the floods which cause havoc to the life and property of millions of people in the plains and reduce the life span of the dams. On account of flood and drought only, States demanded Rs. 7000 crore from the Central Govern-

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Environmental ruin in Chitrakoot

Satya Narain Mishra

The famous pilgrimage resort of chitrakoot, its surroundings and the people around are facing large scale environmental ruin due to deforestation, stone quarrying and stonecrushing work. These have adversely affected animal and plant life of the area. Exploitation of the workers in quarries is rampant. The author pleads for a better deal both for the environment and the quarry workers.

THE FAMOUS PILGRIMAGE RESORT OF Chitrakoot is located in Bundelkhand region, at the administrative level it is spread over a part of Banda district of Uttar Pradesh and a part of Satna district of Madhya Pradesh. In recent years deforestation as well as stone quarrying and crushing, have led to the degradation and ecological ruin of the area.

Amidst allegations of pollution, lung diseases among workers and destruction of the beautiful landscape, the district administration has given orders for the closure of the stone units but to obstruct this a stay order was obtained from the High Court.

Denuded hills are an eyesore, of course, but in addition to this, deforestation also appears to have adversely affected the local climate (making it drier) and reduced the rainfall (reducing it and making it more erratic). Precipitation is getting lesser if annual figures are taken but now it comes more in heavy torrents.

This leads to heavy erosion and sandy deposits in fields, ruining their fertility. Several villages such as Bharatpur Bharthaul, Pathrauri, Raipurva, Daphai, Taraon, Vihara etc. are located just below the denuded hills. Paddy cultivation has now become difficult here. Farm productivity has declined to low levels.

The canal from Baruwa dam near Raipurwa is saturated with sand almost every year. Engineering efforts to stop this have not succeeded.

Future blasting work in the already heavily quarried Bharat Kup—Shivrampur area can gravely endanger the villages below—apart from also posing threat to the buses or other vehicles passing on the roads near the hills.

The eroded soil and the dust from crushers has led to several health problems relating to eyes and lungs among workers and local people. The low paid workers cannot afford timely health treatment and are driven towards a slow death or else their health is so ruined that they are rendered incapable of leading a normal life. Noise pollution has also adversely affected the hearing ability of some people.

Several useful medicinal plants have almost vanished from several of these hills (these include aanvla, neem, babul, pinnrava, bhangra, lisora, shankh pushpi, sahijan, swaranashriri and Pavaand) adversly affecting the village-level cheap or free medicare.

Workers exploited

Nearly 2000 workers are estimated to be employed in around 47 crushers in this area. Some of them are not free to work in other crushers. This employment is of irregular nature with occassional periods of unemployment.

Crusher owners have become extremely rich but the workers continue to lead a wretched existence, earning Rs. 10 to 12 a day in highly hazardous work. Revenue gain to the government is also meagre-nothing compared to what it will have to spend to repair even a part of the environmental ruin caused by the indiscriminate quarrying and crushing work. Some of the largest-scale work during this decade has been done illegally on hills where this work had been banned.

Workers are kept on daily wages and denied paid holidays, insurance, bonus, provident fund and other such facilities. Accidents are frequent but these are generally hushed up without coming to public notice.

In view of the large-scale damage already done, this work has to be checked and the workers given employment in afforestation and other forest—works in nearby forests where there is a lot of potential for employment, if proper planning is done. ❑❑❑

Rural support centres—forgotten identity

V.K. Dhar

ANY SYSTEM OF SETTLEMENT IS PRIMARILY meant to serve as a vehicle for making available the necessary support both for production and distribution of goods as also for bringing social services within easy reach of the people. In order that the settlements of the various sizes perform their historic role of catalysts for the surrounding economies they must be equipped with adequate socio-economic and physical infrastructure.

Within this longer frame of a national settlement system, towns and villages of the size of 5,000 to 20,000 population play a very significant role in the development process of their surrounding rural areas.

Isolated development impossible

In India where nearly 80 per cent of the population even today lives in the rural areas national development has naturally become synonymous with the rural development. With this perspective in view, there has been a constant effort to initiate development in the various sectors of the rural economy over the planning period of the last four decades. A glaring omission, however, has been the neglect of spatial aspects of the whole problem. The rural economy has generally been treated as independent of urban economy. The importance of small towns as centres for supporting rural activities does not seem to have been adequately recognised with the result there has emerged a strong rural-urban dichotomy at the very level of settlements (5,000 to 20,000) where the interaction between the two types of settlements is maximum. Indeed there is a need for complete national settlement system forming a continuum for metroplitan cities to tiny hamlets; the need for integration of rural and urban economies is nowhere greater than at the threshold level of urban settlements where the two areas make maximum use of facilities available in one another Though agriculture is a predominant activity of rural India, other sectors like rural industries and mining and quarrying have assumed considerable importance. It will not be correct to assume that its development and production capacities can be ensured in isolation from towns. The infrastructural requirement of rural economies must extend to high levels in the settlement hierarchy.

In India, for instance, during the British rule, due to imperial objectives of law and order and revenue collection greater emphasis was laid on establishment of administrative headquarters like Tehsil/Taluk and Thana circles which subsequently grew into a kind of central places. It can certainly be hypothesised that if considerations of economic development and optimum utilisation of local resources as well as infrastructural build-up were considered in a spatial relationship along with people's choice and convenience, this pattern of support centres would turn out to be different with far greater balance between the different levels of human settlements.

More support centres needed

The existing settlement pattern thus only tends to increase imbalances with lop-sided development. During the last 40 years there has been an attempt to identify more places as supporting growth centres to meet development needs; but by and large the decisions are more administrative and political rather than based on scientific criteria. In any case there is a dearth of adequate number of support centres to promote development of depressed rural areas. According to 1981 census there were 3302 urban places of which about 2063 belonged to the categories of population less than 20,000 At district level, as high as 67.85 per cent of the districts had less than 10 towns and almost 34 per cent less than 5 towns. In such circumstances, it means that with average size district in India of about 16 lakhs there may be a single town to serve a population of 2 to 5 lakhs. On the other hand, there are 10 districts which are totally rural in character and there are few districts like Muzaffarpur and Katihar in Bihar where population per town ranges form 13 to 21 lakhs. This only means that a vast majority of the population is just not served and the benefits of development are appropriated by a small percentage of people. The possibility of shortage of urban places being made up by a substantially large number of large sized villages. There were in 1981 as many as 9036 places, with population of 5000 or more and even exceeding 10,000 but classified as villages and they were more than twice the number of all the towns and cities in the country. Kerala has 101 such settlements per district out of which 94 settlements per district are the villages with 5000 population or more and in Punjab even rural places with less than 5000 population have better communications and are serving as support centres.

It is not that awareness of the need for growth centres has been lacking. The emphasis was laid on development of small and medium towns during the Sixth Five Year Plan and continued under the Seventh Plan to increase their growth rate so as to enable them to act as

growth and service centres for the rural hinterland and to reduce the rate of migration to metropolitan cities. In pursuance of this objective, the Govenment of India in its IDSMT schemes specified a coverage of towns with a population up to one lakh during Sixth Plan and up to three lakhs during the Seventh Plan. A total of 235 towns were covered in different states until 1985 and in the selection of towns, preference was given to district headquarters. Sub-divisional towns, mandi towns and growth centres. However, only 10 per cent of these selected towns have the population below 20,000. On the other hand, all the States except West Bengal, Andhra Pradesh, Bihar. Himachal Pradesh, Kerala, Punjab & Manipur have more than 60 per cent of the towns with less than 20,000 population, the highest being in Uttar Pradesh (77 per cent), followed by Madhya Pradesh, (72 per cent). In Bihar most towns are small with poor infrastructure.

The census definition gives urban status to many more places than have been recognised by the various State Governments for notification as municipal authorities under their respective enactments for urban local boies. A large number of Places that are statistically urban according to the Census need not be urban administratively. Only about half the Census urban places were constituted as fulfledged municipalities or City Corporations and another 354 are notified area or town area committees. In 1971, there were a total of 1944 urban local bodies-or less than two thirds of the 3119 places classified as urban.

Varying criteria

The criteria for constituting a municipality differ considerably among the various states. In Tamil Nadu which has the largest number of urban places (439) as many as 329 do not come within the purview of urban local government because no town is given municipal status unless its population exceeds 20,000 and its annual revenue is substantially in excess of one lakh. The Gujarat Panchayat Act 1961 extended to places up to population of 30,000 and following the passing of this Act, 42 towns with population of 20,000 or less were converted into Nagar Panchayats and 45 former Municipal bodies with population less than 10,000 were designated as Panchayats. On the other hand there are many municipal bodies with population less than 5000 and practically all the Census urban places in Haryana, Punjab, Jammu & Kashmir, Rajasthan are urban local bodies. Uttar Pradesh has a separate category of Town Areas under a separate Act for its small towns with population around 5000 and Municpal Boards are constituted for places with about 20,000 population, A large majority of such town areas in U.P. have however, been treated as villages under the Census.

Kerala is in a class by itself. There are no nucleated villages. Rural areas are merely linear extension of urban concentrations and the average size of its 1268 census "Villages" works out as 14,102 inhabitants. The average size of a Panchayat exceeds 20,000 and they function more or less in the same style as municipalities. Kerala is indeed a collection of rural towns interspersed with larger administrative and commercial centres.

It will thus be seen that if only the administrative test of notified urban local bodies were applied more than one-third of the places classified as urban will become rural, but if the size test of 5,000 population, which is more usually accepted in U.N. estimates, were applied the number of urban places will become three times and over 55 millions will be added which is more than 35 per cent of the total urban population in 1981. It is not enough to have small towns only but they must also be served by higher level of settlements to be effective agents of development. Most of our districts are essentially rural with small urban centres. Only 103 out of 402 districts were found to have class I towns (i.e. one lakh & over) in 1981 and of these only 74 had both class I & class 11 towns (i.e. 50,000 & over).

The present approach to the "Growth Centres" idea is utterly limited and halting. The location of growth centres or the selection of an existing small & medium town, is generally an adhoc decision often influenced by administrative and political exigenices. A number of questions arise:

Can growth centre strategies be purposeful and effective in ensuring dispersal without taking into account the spatial and functional interlinkage between rural and urban settlement ?

Can investment planning and resource allocations be divorced from the planning of physical interrelationship between various levels of human settlements ?

Will the district plans continue to remain sectoral plans superimposed on a rural canvas, ignoring the existence of urban places so crucial to effective plan implementation ?

or, should these be integrated with a spatial development plan of human settlements ?

The inhibiting factors

A study conducted by NIUA in two districts of Maharashtra & Madhya Pradesh pointed out the various inhibiting factors in growth impulses and economic advancement.

Firstly, poor urban hierarchies hinder the downward flow of services and development impulses.

Secondly, large villages & small towns with less than 20,000 population have the potential to function as service centres to the adjoining rural areas. This attribute of the settlement system need be recognised in allocating investments for development of infrastructure along with plans to provide economic base.

Lastly, the identification of growth centres (small towns large villages) on the basis of population and services and facilities is found to be different from those computed through production capacity, potentiality and rural population density.

Thus it is necessary to recognise the horizontal and

(Contd. on page 34)

High priority to power generation in Eastern region, a must

Arabinda Ghosh

In this article, the author laments that power sector in the eastern region has got the least importance in our Plans as compared to other regions. He points out that no attempt has been made to correct the regional imbalance in the power sector despite balanced regional development being the main objective of planning. He notes with concern that the per capita electricity consumption in eastern region is not only lowest but far below the all-India average. This trend needs to be checked urgently, says the author, to pave the way for faster development of this region.

ELECTRIC POWER HAS PROVED to be one of the most powerful instruments of social change and economic development that the country has ever seen. It is one of the most essential inputs of many vital industries. It has been playing an important role in the development of agriculture and transport sectors. The sectoral pattern of consumption of electric power in India is given below.

TABLE-1

Utilisation of electric power in India (In Percentage)

Sector	Year 1960-61	1970-71	1980-81	1984-85
1. Domestic	10.7	8.8	11.2	13.3
2. Commercial	6.1	5.9	5.7	6.1
3. Industrial Power	69.4	67.6	58.4	55.6
4. Railways/Tramways (Traction)	3.3	3.2	2.7	2.5
5. Agriculture	6.0	10.2	17.6	18.7
6. Others	4.5	4.3	4.4	3.8

Source : (i) Economic Survey 1982-83 P-102 (ii) Economic Survey 1985-86 P-126

In the past, the utilisation of electric power in agriculture was very low. But with the adoption of New Agricultural strategy, the consumption of electric power in the agricultural sector has increased remarkably.

Power generation in India

The availability of power is an important *sine qua non* for the economic development of a country. There are three main sources of generation of power, viz., hydel power, thermal power and nuclear power.

Hydro-power is a renewable natural resource and is the cheapest source of energy. But more than 80 per cent of the hydro potential still remains unharnessed despite the inherent advantages of hydro-electric power plants over thermal and nuclear plants.

Thermal power which is generated by coal and oil has always been the major source of electric power in India. Bulk of the thermal power is generated by coal and only a small fraction is derived from oil. The physical resources for nuclear generation are uranium and thorium.

Talbe-2 represents the share of hydel, thermal and nuclear units in the total installed capacity. The share of hydel units in the total installed capacity has decreased from 43.40 percent in 1970-71 to 43.08 percent in 1984-85. On the other hand, the share of thermal units has increased from 53.75 to 63.34 percent.

Table -2

Percentage Share in Installed Plant Capacity (Utilities only)

Year	Sector: Hydel	Thermal	Nuclear
1970-71	43.40	53.75	2.85
1980-81	39.02	58.13	2.85
1984-85	34.08	63.34	2.58

Source: Economic Survey—1985-86, pp. 125

The total installed generating capacity in utilities which was only 1710 MW in 1950, increased to 42491 MW by the end of March 1985. Substantial as the growth of power sector has been, power shortages have become almost endemic in various parts of the country.

Table 3 shows shortage of power on the eve of the Sixth Five Year Plan in different regions:

Table-3

Estimated shortage of power as percentage of requirement in India in 1979-80

Zone	*Shortage*
Northern Region	16.2
Western Region	14.5
Southern Region	13.4
Eastern Region	23.0
All-India	16.1

Source: Economic Survey 1979-80, pp.16

It may be observed from Table 3 that all the regions have been experiencing power shortage but the worst affected region is the eastern region.

There is a wide variation in the different regions in the per capita consumption of power which has been taken as one of the indicators of growth (Table 4)

From the Table 4, it is found that in 1960-61, per capita electricity consumption in eastern region was highest in India. But during the period from 1960-61 to 1979-80, the situation has abruptly changed through planning process. The rate of growth of energy consumption achieved by eastern region between 1960-61 and 1979-80 has been nearly half the national average. The per capita electricity consumption in eastern region is 97 Kwh in 1979-80 which is not only lowest in India but far below the all-India average.

Table -4

Growth of per capita Electricity Consumption (Regionwise)

Region	*Per capita electricity consumption (Kwh)* 1960-61	1979-80	*Annual compound rate of growth (%) 1960-61 to 1979-80*
Northern	21	126	9.9
Western	50	184	7.1
Southern	35	133	7.4
Eastern	55	97	3.0
All-India	38	130	6 7

Source: Planning Commission.
Regional Dimensions of India's Economic Development, pp. 101

But removal of imbalances among various regions has become the foremost objective of planned development in India. In the Sixth Five Year Plan it has been stated that "an important objective of the Plan is to bring about a progressive reduction in regional inequalities in the pace of development and in the diffusion of technological benefits. It should be generally accepted that fulfilment of the objective requires upgrading the development process in the backward regions rather than curtailing the growth of these regions which have acquired a certain momentum."

Though balanced regional development has always been one of the main objectives of economic planning, yet no attempt has been made to correct the regional imbalances in the power sector even in the Sixth five year plan (Table 5).

Table -5

Regional Distribution of installed capacity (MW) as on March 31, 1980 and March 31, 1985 (Utilities only)

	31st March 1980 Total capacity	*31st March 1985 Total capacity*	*Annual compound rate of growth*
Northern	8248	11838	7.5
Western	7834	12937	10.6
Southern	7207	10358	7.5
Eastern	4866	6567	6.2
North-Eastern	334.	791	24.5
All-India	28489	42491	8.3

Source: (i) Planning Commission : Sixth Five Year Plan 1980-85, pp 232. (ii) Planning Commission: Seventh Five Year Plan 1985-90, pp 159.

As can be seen from Table 3 and Table 4, the gap between the demand and supply of electrical energy is the highest in the Eastern Region and the rate of growth of energy consumption achieved by Eastern Region between the period 1960-61 and 1979-80 has been nearly half the national average, but the annual compound growth in the installed generating capacity of electric power is only 6.2 percent during the Sixth Five Year Plan period which is also the lowest in India. It is more tragic to say that though Eastern region possesses nearly 75% of the coal resources of India, yet the annual compound rate of growth in the installed generating capacity of thermal power is also the lowest in India even in the Sixth Plan Period (Table 6).

Table -6

Regional distribution of installed capacity (MW) of thermal power as on March 31, 1980 and March 31, 1985

Region	*31st March 1980*	*31st March 1985*	*Annual compound rate of growth*
Northern	4083	6531	9.6
Western	5624	10695	13.7
Southern	2614	3790	7.7
Eastern	3959	5587	7.1
North Eastern	188	480	20.6
All-India	16468	27083	10.5

Source : (i) Planning Commission-Sixth Five Year Plan 1980-85 p 232 (ii) Planning Commission- Seventh Five Year Plan 1985-90 p. 159.

Again, a regionwise analysis of the planwise achievement of targets set for additions to the generating capacity shows a wide range of variation (Table 7).

Only the Western and Northern regions show a consistently high rate of achievement, the cumulative achievement being 86.3 and 69.2 percent respectively. But the Eastern region has recorded the lowest cumulative achievement during this period.

Again the hydel-thermal mix in the eastern region a

Table -7

Regionwise percentage achievements of Plan targets for additional capacity (Utilities only).

Region	Percentage Achieved		Percentage cumulative achievement
	5th Plan	6th Plan	
Northern	69.0	69.4	69.2
Western	86.8	86.0	86.3
Southern	47.6	69.0	59.2
Eastern	35.6	51.2	43.8
North-Eastern	38.5	68.3	59.8
All-India	62.6	71.2	66.8

(1) Planning Commission: Regional Dimensions of India's Economic Development, pp. 98.
(2) Planning Commission: Seventh Five Year Plan 1985-90 Vol. II pp. 159.

the end of the Sixth Five Year Plan was 14.9 : 85.1. This indicates that electric power in the eastern region is highly dependent on the functioning of thermal units.

Table-8

Statewise Plant Load Factor (Thermal) (Percent)

State	Year	
	1980-81	1984-85
Bihar	31.4	30.5
Orissa	34.0	32.2
West Bengal	42.1	36.5
All-India	44.6	50.1

Source : Economic Survey.
1985-86, pp. 23.

The Sixth Plan closed with a Plant Load Factor (PLF) of 50.1 percent. far below the level of 55.9 percent achieved in 1976-77. Again from Table 8 it is clearly evident that PLF in thermal plants of all states of eastern region viz., Bihar, Orissa and West Bengal has been very low, averaging below 43 percent all through the Sixth Plan. 'Investment in the power sector in these states at these efficiency levels, is not economical.' (Economic Survey-1985-86) It is more interesting to note here that when the overall PLF of thermal plants in India has increased during the Sixth Plan period, the PLF in thermal plants of the above states of Eastern region has decreased.

Mass poverty

Due to such continuous negligence to the power sector of the eastern region, the eastern economy has been crippled by mass poverty. The percentage of people below the poverty line in the states of eastern region is higher than that of All India average (Table 9)

'Removal of poverty remains the central concern of planning in India. The emphasis on accelerated agricultural growth through expansion of irrigation facilities and increased productivity of rice in eastern India,...... will make a substantial contribution to a

Table -9

Percentage of poor people

Name of the States	Poverty Ratio (In 1983-84)
1. Bihar	49.5
2. Orissa	42.8
3. West Bengal	39.2
4. All-India	37.4

Source: Planning Commission:
'A Technical note on the Seventh Plan of India (1985-90) pp. 16.

reduction of poverty.' (Technical Note on 7th Plan) In the Report of Study Group on Agricultural Strategies for Eastern region of India, it has been stated that the eastern region has been lagging behind the rest of the country in respect of agricultural performance. The gap between the actual output and the potential that can be achieved with the known technology is very high in this region' (Foreword by C.H. Hanumantha Rao to Report of the Study Group on Agricultural Strategies for Eastern Region of India). In verious studies, the poor performance of agriculture in Eastern India is generally ascribed to the fact that 'a sound infrastructure on irrigation and drainage, which can overcome the constraints posed by physical environments, has not been developed. Despite large surface and ground water resources, gross cropped area brought under irrigation is only a little over 30 percent. The progress in ground water exploitation is seriously hampered due to inadequate and erratic supply of electric power. This inadequate and erratic power supply discourages private investment in tubewells'. (Agricultural Productivity in Eastern India Vol. I, RBI.)

In the Seventh Plan document, it has been stated that 'stagnation of production and low productivity levels of rice are affecting the income level of about 66 million rice farming families of the Eastern region. The important factors responsible for this situation are the lack of suitable technology. In order to overcome the existing constraints and accelerate the growth of production and productivity of rice in these areas, a pilot project was initiated in 1984-85. The emphasis of the project will be on the removal of basic physical and infrastructural constrainst through development programmes such as exploitation of ground-water and development of irrigation and drainage facilities so as to make a tangible impact on rice production and productivity'. (Seventh Five Year Plan Vol. II)

'Water management emerges as a key factor in the development of this region. In many of these regions as much as 80 percent of the available ground water potential remained untapped which can be exploited through public as well as private tubewells at a relatively low cost'. (Foreword by C.H. Hanumantha Rao, Ibid)

'Tubewells in Haryana and Punjab are operationally more efficient as bulk of them are under the control of farmers and are also energised with electricity. The energisation of tubewells in turn, has been facilitated by the availability of electric power in all villages. In fact,

the tubewell boom in Haryana and Punjab is due to rapid spread of rural electrification. The situation is different in the Eastern region (Table 10). Rural electrification has not made much [illegible], as a result, development of tubewells has [illegible]. Private tubewells are few in number and even these are underutilised due to uncertain and erratic power supply'. (Agricultural Productivity in Eastern India Vol. I, RBI)

Table -10

Village electrification and Pump [illegible]

Region	Estimated potential in terms of Pump sets	Energised as on 31.3.1985	Percentage of Col. [illegible] Col. [illegible]	Percentage of villages electrified as on [illegible].3.1985
Northern	37,75,000	14,64,[illegible]	[illegible]	[illegible]
Western	27,00,000	16,96,462	[illegible]	71.9
Southern	32,50,000	22,51,929	[illegible]	87.4
Eastern	20,05,000	2,61,14[illegible]	13.[illegible]	50.0
North Eastern	2,40,000	3,781	1.[illegible]	47.3
All India	1,19,70,000	56,77,170	47.4[illegible]	64.2

Source: Planning Commission: Seventh Five Year Plan 1985-90, pp. 163. (Volume II)

Unsystematic approach

· But the power sector of the Eastern Region has got least importance even in the Seventh Five Year Plan period in comparsion with other regions (Table 11).

Table 11

Regionwise Power Capacity in Utilities

	Installed capacity (MW) as on 31.3.1985		Expected generating capacity (MW) by 1989-1990		Annual compound growth rate during Seventh Five Year Plan (Percent)	
Region	Thermal	Total	Thermal	Total	Thermal	Total
Northern	6531	11838	11084	18467	11.1	9.2
Western	10695	12937	16317	19468	8.8	8.5
Southern	3790	10358	[illegible]	15811	[illegible]	9.0
Eastern	5587	6566	8113	[illegible]	[illegible]	8.2
North-Eastern	480	791	672	1221	[illegible]	9.1
All India	27083	42491	43031	64736	[illegible]	8.8

Source: Planning Commission: Seventh Five Year Plan 1985-90 Vol. II, pp. 159.

From the foregoing discussion, it is clear, although in the Seventh Plan documents and in the reports of several study groups, it has been suggested to take definite steps to harness the potential in the rice and wheat yields in Eastern Region, the attempts in this direction have not been systematised. As there is a very high positive correlation between rural electrification and extension of irrigation facilities, this continuous negligence to the development of power sector in Eastern Region will frustrate all programmes for stepping up agricultural production of the region and the region will sink in the very serious social and political problems which result from under-employment and unemployment and acute poverty of the teeming millions of the region who do not have ready access to alternative sources of employment and income. ☐☐☐

(Contd. from page 14)

Let us be optimistic

In this rather bleak scenario, it would be unrealistic to expect that things will suddenly take a turn for the better and that optimum land management will become the focal point for all rural and agricultural development in our future plans, as it very well deserves to be. It seems that we have still a long way to go before we will have fully learnt the lessons of recurring droughts and floods, the declining productivity of our lands, the endemic shortages of food, fuel, fodder and timber from which we suffer and the continuing destitution of our people. Perhaps the cup of our misery is not yet full and things have to become still worse before they become any better.

In such a setting, it is incumbent on those who can read the writing on the wall not to give way to despair but continue to fight for the cause. They must, in particular, do whatever they can to dispel "resource illiteracy" and to create, with the help of enlightened sections of the media, a body of public opinion which will be strong enough to generate the political will necessary for the re-ordering of the priorities that have brought the country to the present pass. ☐☐☐

(Contd. from page 18)

only information may be considered as biased because basic survival of the media through entertaining is also essential. Similarly all programmes can not be produced primarily to serve the purpose of public entertainment. The programme of entertainment in mass media is an important component because these programmes perform the role of "mind soother". This gives mental relief and for a few months the audience forget their worries. The idea of bringing entertainment and information together is now being experimented through TV serials and there is fair amount of success in it. The components responsible for higher efficiency of a medium in its educational endeavour must be very precisely determined through testing and research. The educational process initiated by the mass media is well connected with elements like (i) whom to educate, (ii) what to educate (content), (iii) how to educate (method suitable for audience interest), (iv) feed back. The success of an educational programme must be determined on the quantum of efforts made for each element. The different dimensions of each element for the success of a programme and its corresponding effect on audience should be exclusively measured for deciding future course of action. Thus the mass media can create a climate for development. ☐☐☐

Family welfare programme in Sangli

Vijaya Joshi

The author made an on-the-spot study of family welfare programme in Sangli district of Maharashtra. Here she gives a bird's eye view of the progress made under this programme. She appreciates the initiative of ladies' clubs and similar agencies in keeping people away from bad habits.

IF YOU ARE IN BOMBAY or in any other metropolitan city, you feel depressed over the population explosion. It is often stated that thousands of families pour into the vast metropolis of Bombay every month. The roadside slums are proliferating. Dharavi slum in Bombay is the biggest one in Asia. The pavements in Bombay are flooded with the emigrants and hence the citizens of Bombay are worried over the population explosion

With this background, I started a tour of Sangli district. To my surprise, the entire district was covered by the family welfare department of the State Government. Within a day, I toured the entire district of Sangli and was very much impressed by the progress made in this sphere

Maharashtra State has always been in the forefront among all the states in the country in the implementation of family welfare programmes. The State has won so far 13 national awards in the last 20 years. The Government had handed over the family welfare programme to the Zilla Parishads (ZPs) on an agency basis during 1968 The ZPs have devoted wholeheartedly to this laudable job and hence the dividends are appreciable. The Panchayati Raj is also celebrating its silver jubilee this year. The ZPs have planted about, 1,50,000 trees this year in spite of the drought. The district has specialised in grape cultivation. Tamarind, sugarcane and milk are the yield of this district and in spite of the drought, the agricultural production has gone up. In 1962, there were only seven primary health centres whereas there are over 60 PHCs today. The population of Sangli district according to 1981 Census is over 18 lakh. It is divided into eight tehsils. The district hospitals, primary health centres and sub-health centres provide complete medical facilities to the people.

Municipality has its own hospital in Sangli and there is a Mission Hospital in Miraj. The Government also runs a medical college. Under the Integrated Child Development, Services Scheme, supplementary nutrition, immunisation, health check up, referal services to children below six years, pregnant women and nursing mothers, non-formal pre-school education to children, nutrition and health education to women are provided to the entire population. Issues like raising of marriageable age, freedom from drugs, eradication of superstitions. etc. are also taken up by the primary health centre workers. They also take up identification of the leprosy patients and motivate the eligible couples for sterilisation.

The State Government has implemented a scheme of "Small Family, Great Town" in 117 villages in Sangli district. The ZPs are taking active interest in this scheme. We visited three villages, namely, Alkuden, Gavhangaon and Jaigavhan. There are about 400 families in each of these villages covered by the PHCs.

The PHC worker goes from house to house on a routine visit. She enrolls the members of the family on a card and notes the health status of the family. If there is night blindness, T.B., leprosy, anaemia, etc. to any member, he or she is taken to the nearby hospital. The pregnant women are given anti-tetanus injections and nutritious food. The infants are immunised against polio tetanus, whooping cough, typhoid and measles and, if need be, the vitamin A. The ladies' Club is active in villages where there are about 300 housewives. The need for small family is underlined through songs and small plays in this club. The eradication of superstitions, need for a healthy family and importance of literacy are also stressed. About 25 per cent of the womenfolk and 35 per cent of the menfolk are literate in this district.

The co-operative sugar factories have elevated the economic level of the entire district. There are 12 sugar factories in this district. Generally, affluence gives way to alcoholism and drug addiction. But surprisingly, here, fight of the ladies' clubs against these evils has convinced the menfolk and they have given up these bad habits. The annual population growth rate of this district is also very low, i.e, 1.8 percent.

The Bhagini Nivedita Pratisthan Mandal, which is a voluntary organisation, has done a laudable job. It was established in 1970 for the upliftment of the women. The Pratisthan has helped the Devdasis in their

(Contd. on page 32)

News about planning from Parliament

The Minister of Planning and Programme Implementation, Shri Madhavsinh Solanki gave following information about plans and planning to Parliament during the monsoon session:

Draft Eighth Plan

Under instructions from the Prime Minister as Chairman of the Planning Commission, the Commission is working on the implications of alternative higher growth scenarios for the 8th Five Year Plan. The related strategies will be set out in the Approach paper for the consideration of the National Development Council.

Industrial Planning

Apart from other areas of socio-economic activities, a greater thrust to industrial planning at State and District level is also envisaged in the Eighth Five Year Plan. This is in the process of discussion as an ongoing exercise in the Plan formulation. In addition to the National and State level Planning, the Government is examining the possibility of enlarging the scope of district level planning.

Rural development Planning

The strategy laid down in the Seventh Five Year Plan (1985-90) of accelerated agricultural growth, increased productivity of rice in eastern India, developing the potential of dry land agriculture, adoption of special measures to increase productivity and incomes of small and marginal farmers, expansion of irrigation facilities, implementation of Minimum Needs Programme, and special anti-poverty and employment programmes specifically designed to raise incomes and productivity of the people below poverty line will be continued during the rest of the Seventh Plan period.

G.V.K. Rao Committee Report

Planning Commission has considered the report of the Committee headed by Shri G.V.K. Rao to review the existing administrative arrangements for rural development and poverty alleviation programmes. In due course of time, the matter will be placed before the National Development Council for consideration before final decisions are taken.

The main thrust of the report is on separation of development functions from regulatory functions at different levels, preparation of district plans, greater participation of voluntary organisations/beneficieries of planning and implementation of Rural Development Programmes and revamping of block level administration so as to achieve total delivery mechanism for rural development.

State Planning Boards

State Planning Boards have been constituted in all the States, except the States of Sikkim and Karnataka. In Karnataka however, there is a State level Economic and Planning Council.

The State Governments have been advised to strengthen their planning apparatus and they were requested to constitute an apex body at the State level with the Chief Minister as the Chairman and the Finance Minister, the Planning Minister, and the technical experts representing various departments and disciplines, as Members. Similarly, to facilitate planning at the district level, among other measures, States have been urged to set up District Planning Boards/Councils, with appropriate composition,

Disparity in rural and urban income

According to the estimates compiled by Central Statistical Organisation for the year 1970-71 the average per capita income for rural and urban areas was Rs. 499 and Rs. 1201 respectively. Corresponding information for the subsequent years is not available.

The major thrust of planned growth in the country has been to reduce disparities in income. Almost all the points of the Twenty-Point Programme including Integrated Rural Development Programme (IRDP), National Rural Employment Programme (NREP) and Rural Landless Employment Guarantee Programme (RLEGP) are oriented towards the target groups in rural areas. These programmes have been continued in the Seventh Five Year Plan with an accelerated pace with emphasis on agricultural growth, developing the potential of dry agriculture and adoption of special measures to increase the productivity, of small and marginal farmers.

Minimum needs programme

The Seventh Plan outlay for Minimum Needs Programme is Rs. 11800.94 crore. The expenditure is likely to be within the outlay except in the Education

Sector where new Programmes have been taken up for implementing the National Policy on Education after the finalisation of the Seventh Plan.

Projects for Eighth Plan

First priority will be given to the expeditious completion of the on going schemes/projects as at the commencement of the 8th Plan. So far as new schemes/projects are concerned a decision will be taken in the light of intersectoral priorities set out in the Approach Paper of the Plan to be approved by the National Development Council.

Delay in central projects

According to the information available in the Ministry of Programme Implementation, some of the major projects, each costing over Rs. 100 crore in the power, fertilisers, coal and steel have suffered delays due to various factors including delays in land acquisition and in environmental clearances/equipment supply. The total investment anticipated in these projects is of the order of Rs. 25,000 crore.

Delay in project completion

As on 31st March, 1988, 319 central projects, each costing over Rs. 20 crores in 14 sectors are under the Quarterly Monitoring System. The total cost of all these projects taken together as anticipated at the end of March, 1988, showed an increase of 48% in relation to the total originally approved cost.

15 projects put back their commissiong dates in 1987-88. 131 projects have reported additional delays during 1987-88. Some of these projects have reported delays more than once during the year.

(Contd. from page 30)

rehabilitation. Devdasi system is a stigma on our culture. Devdasis are denied normal life and looked down upon by the entire coummunity. The Pratisthan has helped them earn their own living through stitching, knitting and cooking etc. Establishment, of working women's hostel for girls taking higher education comes under other activities. In the educational field the condensed courses for adult women, libraries for neo-literates, national adult education programme are undertaken. In order to increase the family income, dairy units, canteen, tailoring, small saving units,etc. are started by this Pratisthan. The success of this voluntary organisation lies in the devotion of workers. The selfless volunteers have devoted their entire life to the social cause. Taking a clue from Maharshra, five states in the country, namely, Goa, Andhra Pradesh Karnataka, Uttar Pradesh an Gujarat invited this organisation to establish similar Pratisthans there also. The funding agencies are Government of India, Central Social Welfare Board, State Social Welfare Advistory Board, ZPs, Gram Panchayats, public donations, etc.

(Contd. from page 7)

ment of Telematics (C-DoT) in one town a day has already started and promises revolution in the countryside.

Against this sanguine backdrop, one must also appreciate and analyze the question-marks confronting the high technologies. It is abundantly clear that the evils of urbanisation and industrialisation like ecological imbalance and environmental deterioration are too serious to be ignored. This stark fact was dramatically demonstrated recently when Bhopal became a veritable gas chamber following leakage of the lethal gas methyl iso-cynate from the Union Carbide's pesticide factory. The Three Mile island disaster in the United States in 1979 and the Chernobyl accident in the USSR in 1985 proved, if proof were necessary, that even the 'fail-safe' nuclear technology was after all not all that safe. Human error can make a mockery of the finest engineering.

High-tech means high progress alright but it also presupposes the necessary discipline and infrastructure as also the safeguards to be scrupulously adhered to. In India, the litany of industrial accidents does not even arouse strong resentment and the death and disablement caused by callous negligence is sought to be nationalised as the fruits of 'Karma' or destiny.

on the threshold

Be that as it may, we are on the threshold of a new era. Prime Minister Rajiv Gandhi's accent on new management culture and technological progress augurs well for the future. Development sans destruction should be our aim. To be sure, as the 'Nature' magazine's report 'Science in India' emphasized: "The government seems to be taking the empirical view that what has been spent has returned social, economic and intellectual benefits, and that spending a little more can only yield more of the same. That is a good first approximation to a strategy."

Splendid achievements we have aplenty but the chasm between high technology and rural poverty should be bridged and abridged at the earliest. Failure to demolish this dichotomy and abolish this ambivalence will be a sure recipe for unmitigated national disaster.

(Contd. from page 10)

utilized extensively. Rubber plantation has caught the attention of the authorities in this region admirably, but little effort has been made to set up rural industries based on rubber latex.

Minor forest and agricultural wealth like wild banana, wild seeds, pineapple, betel leaves and other tree leaves widely grown in this region are yet to find remunerative commercial utilization for dearth of appropriate technologies or utilization of available technologies appropriately. Although this region produces about 2% of arecanut of the country, finished products like 'Pan bilas', 'Pan Parag' etc., which are produced only on cottage scale elsewhere, find ready markets here. Huge agricultural and forest wastes are causing disposal problem, but suitable available technologies are yet to be exploited gainfully. Despite huge potential, there is hardly any industry based on diary products and animal wastes like hides and skins, bones and other slaughter-house by-products. Appropriate technologies are yet to be used in rural sector based upon mineral wealth. Particular mention may be made of the commercially exploitable clay of this region for pottery industry with the involvement of rural artisans.

Conclusion

It must be recognized that the rural development in the North-East cannot be viewed in isolation and it needs to be interlinked and interwoven with the various other development activities in the region. The special conditions and circumstances prevalent in the rural areas at different altitudes of this region demand a special strategy for application of already existent technologies or evolution of newer appropriate technologies suitable for different ethnic groups of people. Such a strategy should continuously take care of the traditional skill, crafts and occupation of the rural people and their needs, aspirations, constraints, limitations and inherent capabilities.

Again, no single set of technologies is applicable uniformly for all the rural areas of this region because of diversity in climate, topography, culture and mode of living. In most cases, it may be more necessary to evolve appropriate technologies depending upon the local conditions than to transfer already existent technologies. It may be quite often necessary to reorient and restructure suitably the existing modern rural technologies for application in this region. An appropriate mix of the technologies of yester years traditionally practised by the people and the modern rural technologies of today will be the right step towards propagation and adaptation in the rural area of this region. Simultaneously, strenuous efforts towards generating awareness about the utilities and usefulness of advanced technologies need to be mobilized as a pre-requisite for their introduction in the rural areas of the North-East. □□□

(Contd. from page 15)

cal. The government, obviously believes that a ten per cent price rise would prove to be attractive enough to inspire higher production to narrow down the gap between demand and supply.

The fluctuations

One cannot, however, forget that the prices of commodities like oilseeds, pulses and cotton fluctuate very widely in the open market. If the next monsoon turns out to be normal and the special efforts being

made to boost the production bear fruits, a slump in the prices at the time of peak marketing season cannot be completely ruled out. Such a situation can demand intervention of public and cooperative agencies into the market to provide the needed price support to the growers. The government, therefore, seems to have done well to designate the National Agricultural Cooperative Marketing Federation (NAFED) as the central nodal agency to undertake purchases of kharif pulses in the 1988-89 season at the minimum support prices.

The move to raise prices should also be viewed as a significant part of the official strategy to achieve the ambitious foodgrain production target of 166 million tonnes this year and to achieve a still higher level of 175 million tonnes next year which would be the terminal year of the Seventh Five Year Plan. □□□

(Courtesy: Spotlight AIR)

(Contd. from page 22)

ment in 1987-88 while we have spent nearly Rs. 1000 crore on drought and flood management.

The poor the sufferer

Environmental degradation either due to deforestation, soil erosion or any other reason is ultimately affecting the poor people of the society specially the rural poor, landless labourers who are being uprooted because of the loss of soil fertility resulting in food grain scarcity. This situation is forcing them to move to the city in search of employment and are forced to live in slums in the cities.

Suggestions

In order to halt the deforestation and avert ecological crisis the following two steps are necessary :—

(i) Meet all the wood requirement through sources other than our existing natural forest. For reducing consumption of fuel wood apart from popularising improved chulhas like 'Dhaula-dhar chulha' which consumes less wood and cooking utensils like pressaure cooker, alternative source of energy like biogas, L.P.G, electricity etc. may be provided. To meet the timber requirement we can import it as in other countries like Japan which has preserved its forests through import. It is estimated that on account of fuel wood only we have to spend Rs. 4000 crore for arranging alternative source of energy equivalent to 125 million tonnes of fuel wood at present market rate and Rs. 700 crore to import 9 million M3 of timber every year.

(ii) Afforest 5 million hectares of wasteland every year. The cost comes to Rs. 2500 crore every year, which is not much compared to environmental change and risk to the life and property of the nation. □□□

(Contd. from page 25)

vertical relationship between the different sizes of human settlements from the villages to the district and regional town or city in terms of space population to be served, functions to be performed and the level of services to be delivered. The primary 'growth centre'—large village or a small town must have a two way relationship serving on the one hand the villages in its command area and on the other establishing linkages with higher level settlements for transmitting institutional support, development benefits, innovations and technology.

Re-orient district plans

The present methodology of the District Plan fails to recognise this vital relationship. They are almost exclusively rural development plans with sectoral allocations If the objectives set out in the draft Seventh Plan are to be realised, the techniques and scope of district plans need to be re-oriented in two respects:

(a) District Plans should cover the whole range of human settlements and the programmes and policies of rural and urban development should be interlinked in a holistic sense, and
(b) the development strategies should be linked to a spatial, physical and resource plan of human settlements from the village upwards, for balanced gorwth and equitable delivery of services. □□

To Authors & Contributors

· **YOJANA does not accept articles and write-ups by registered post. Authors and contributors are requested to send their articles by ordinary post. Hand-written articles are not accepted.**

Science kits for all primary 90,000 Upper Primary Schools

The Government proposes to supply Science Kits to all primary and about 90,000 upper primary schools during the Seventh Plan period for the promotion of science technology among the students. The Science Kits are to be supplied in the schools under the Centrally-sponsored Schemes of Operation Blackboard and Improvement of Science Education in schools respectively. During 1987-88 Central assistance to States and Union Territories was sanctioned to cover a total of 1,13,412 primary and 20,719 upper primary schools. Central assistance for the supply of Science Kits is on the basis of detailed proposals formulated by State Government/Union Territories as per the requirements of the relevant schemes. □

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India : vision-reality gap

Dr. P.M. Bhargava & Chandana Chakrabarti

With the attainment of Independence dawned a vision of an India of fulfilment and satisfaction all around. How far has this vision been translated into reality? The authors here try to answer this vital question. They analyse in depth the vision-reality gaps on various issues facing us today and suggest appropriate steps to bridge those gaps. Vastness of the country and diversity of its culture have caused manifold problems to erupt, appearing many a time insurmountable and beyond solution! But the authors are confident that with all the ingredients present in the country today for accurate diagnosis of these problems, their solution should not be difficult. And they do suggest remedies except for one problem, i.e., of political, social, economic, intellectual, moral and ethical integrity. And, they admit, they have no recipe for that. For the solution of this problem, the authors plead, 'the prize must go to those who can work out and implement such a recipe – that is, replace corruption with integrity in every sphere'.

TO LIVE IS TO DREAM. When the dreaming is done while one is awake and fully in command of one's senses; when the dream pertains to objectives which are conceived in the larger interests of the people and would take us one step further in the direction of our cherished utopia, taking into full account the historical imperatives, the realities of today, and our assets and liabilities; when the dream is about not only an objective but also about the process of achieving the objective, the dream turns into a vision.

When we became free in 1947, we had such a vision. The visionary *par excellence* was Jawaharlal Nehru. The nation shared this vision. The miseries of the past were forgotten in the prospects of the future.

The question we now ask is: to what extent has this vision been translated into reality? The answer to this question would be, in a way, an assessment of our progress during the last four decades and what, we believe, should and can be done in the future to bridge the vision-reality gap. We are not experts in all the fields concerned, but we believe that making an assessment of the extent to which the vision has been translated into reality, is not only a prerogative but also an obligation of a citizen. After all, every objective we mention below is something that concerns all of us. We are acutely aware that statistics are not the sole measure of progress; therefore, we shall use it sparingly.

To assess progress is difficult enough; to recognise our failures is even more difficult. To suggest what could be done to bridge the gap where we have not been so far successful, is much more difficult, for one has to think of solutions which are *implementable,* and which do not have impossible-to-achieve prerequirements. We are acutely aware of all this while embarking on this exercise.

We recognise that no worthwhile well-defined mission (objective + the modus-operandi to achieve the objective) is static. As time passes, one may need to modify it due to unexpected events – such as new discoveries in science, advances in technology, or changes in life styles. Then, there are new, unexpected pulls and pushes, changes in availability of resources, and so on, which would tend to change the course of the mission unless counteracted. The visionary can, therefore, never be complacent or insular to change – change anywhere in the world, for happenings are globally interrelated today.

So, here is our little tongue-in-cheek dictionary of the 'elements' of our country's vision in 1947, our assessment of where we are, and what we feel can be done to close the vision-reality gap.

Basic Requirements

The vision

The basic requirements of all individuals in respect of water, power, housing, clothing, food and transport are met.

We are only wishing for those conditions to be obtained in regard to the above-mentioned basic requirements which would allow an individual to live in dignity, not affluence.

The reality

After forty years of Independence, we have not been able to provide adequate and protected water supply to a majority of our people. When even in the urban areas water is not supplied daily, leave aside 24 hours, the plight of those living in villages can well be imagined.

The economic future and well-being of a nation and the quality of life of its people depends largely on the

availability and cost of energy which, in one form or another, enters practically every single economic activity. While the power industry in the country has recorded a phenomenal rate of growth in terms of volume and technologial sophistication over the last few decades, including the construction of a number of major river valley projects, neither have we been able to meet our energy demands fully nor have we been able to reduce the cost of energy (4.65 lakhs of villages out of 5.75 lakhs are yet to be electrified).

Our housing problems have tended to worsen over the years both qualitatively and quantitatively. Housing has kept pace neither with the increase in population nor with the rate of urbanisation. While congestion, slums and squatter settlements characterise urban areas, rural areas are faced, in addition, with the absence of essential services and poor environmental conditions.

Although there is enough food and clothing available, low purchasing power of a large segment of population prevents people from obtaining what they need to satisfy their minimal requirements.

That India's progress in the area of trnsportation since Independence has been substantial, is supported by the facts that *(a)* the Indian Railways have grown into Asia's largest and the world's fourth largest railway system, running more than 11,000 trains every day, connecting over 8000 stations; *(b)* India has the largest merchant shipping fleet among the developing countries and ranks 16th in the world in shipping tonnage, besides having four major ship-building yards; and *(c)* the road network in India is the largest in the world. But the question is, have we been able to reach this facility to our rural masses? There are scores of villages in the country even today which can be reached only by walking.

To bridge the gap

As regards water, it is primarily a question of management and control of water resources. One would need to evolve measures to control flood and drought. We would have to recognise the relationship between water conservation and parameters such as environment (for example, deforestation). With regard to providing enough and adequate housing, it will not be enough to muster resources; one would also have to worry about the ever increasing population. Intensive instead of extensive agriculture, that is putting all the resources into naturally endowed area and employing much fewer people than is the case today, while finding alternative employment for the rest may be a solution to the food problem. Of course, an ideal situation would have been to deal with the food problem at a transnational level, where food production and resources of the world could be pooled, but that is hardly realistic.

As regards power, judicious combination of new strategies (such as microhydel and energy plantations), biogas (for places such as schools, and *not* for home use in villages), nuclear power, cutting down of transmission losses, and full utilization of installed capacity, can probably allow a quantum jump in power production, so that power is not a limiting factor for development.

The solutions to these problems have social, political, economic, scientific and technological elements. The main responsibility, however, for our inability to find total solutions to these problems rests with the higher echelons of power in the country, where, indeed, the lack of genuine will and determination has been.

Education

The vision

Everyone has equal access to education right from the beginning.

The reality

At the time India gained its Independence in 1947, we had twenty two universities. As of today, we have 155 universities, which include 107 traditional universities, 22 agricultural universities, 10 institutions of national importance and 16 deemed universities. Out of the 10 institutions of national importance we have 5 IITs which provide education in science and technology, one in statistical techniques, two in medical sciences, one in Hindi language and another in oriental studies. Besides, we have four Indian Institutes of Management which provide education in management.

At the time of Independence, we had 28 medical colleges and 12 engineering colleges. As of today, we have 150 medical colleges and 135 colleges of engineering including the five Indian Institutes of Technology.

Yet, in 1984, even though the number of primary schools had risen to over 5 lakhs, the number of middle schools was just about 1.25 lakhs and higher secondary schools a little over 0.5 lakhs. Besides spurious registration in the often 1-teacher (at times, no-teacher) primary schools, there are enormous drop-outs in Class V, VIII and X. Essentially, eduction in India has been a hereditary prerogative. Only the privileged, be they from the cities or from the villages, have real access to the educational system. It wouldn't be wrong to say that less than three percent of the population of the country has real access to education. This means that in this 'class' every child shall go to school, shall go through school to high school, through high school to university and then, finally, get a job. From the remaining 97 percent, a negligible percentage would get into the mainstream of education every year. This does not change the complexion of either class.

In fact, functionally, the single-most important division of people in India is between those who have access to education and those who do not. Essentially, this has led to a situation where the 3 percent educated Indians have replaced the British as exploiters of the remaining 97 percent of the population. And the two classes haven't been mixing any more than they did during the British rule. The primary reason for this has been the lack of democratisation of education.

To bridge the gap

The class and caste basis of the present day education system must be destroyed. This can be done only by nationalisation of primary and secondary education, by abolition of private schools and colleges to which only the privileged few may go, and by evolution of a national curriculum and a policy which will allow its implementation in every school in the country. The cur-

riculum, syllabus and text books should, in addition to providing knowledge and skills, inculcate a set of values which are rational and anti-obscurantist, and which would prepare one to cope successfully with the environment. The system must guarantee a certain minimum education to every citizen. There must be facility for those who are sufficiently motivated and talented to acquire higher education in a variety of fields. The level of this higher education must represent the state-of-art in the field taken globally.

Employment

The vision

There is no unemployment, and opportunities exist for all to optimise expression of their inherent capabilities, including the creative ability.

The reality

Although new avenues of employment have opened in the country since 1947 due to increased industrialisation, there has also been reduction in employment in some of the more traditional areas – for example, in agriculture in some parts of the country, due to extensive mechanisation. Moreover, the new employment opportunities have been more than neutralised by the increase in population; therefore, the level of unemployment has not decreased. And, it is not only unemployment that has been our bane during this period; it is also malemployment – that is, employment which is not commensurate with the person's inherent or acquired abilities and/or skills. We wonder how many Ramanujam's and Raman's are lost to us every year on account of the fact that more than 95% of our population is deprived of proper and adequate educational opportunities. We wonder how many of the under-12s that work in gas stations or in restaurants, or in houses as cheap labour, could have gone on to win a Nobel Prize had they been given the opportunities that so many of us have had.

Then, there are the vast salary differences between people employed for doing different kinds of jobs. In the more developed countries, the salary hierarchy and functional hierarchy do not necessarily go hand in hand. In our country, the hierarchy of salary strictly follows the socially determined hierarchy of jobs. Why should the carpenter try to be the best carpenter in the world when he knows that even if he is, he will always be regarded as much inferior to the worst of the third grade white-collar workers.

On the other hand, a great deal has been done in regard to providing facilities for expression of creativity in handicrafts. Before Independence, about 20% of our cloth was woven on handlooms; today, inspite of the near doubling of population, some 40% of our cloth is woven on our handlooms. And, often, each piece of work is a work of art. Further, opportunities in every area including science have increased. Yet, the environment is far from conducive to creative endeavour. Excellence is at a discount and mediocrity flourishes. Those who work and produce have virtually no leisure – no time to think. A village woman spends most of her waking hours collecting material for food or cooking it. It is a miracle that inspite of this, we have something like the Madhubani paintings. This only shows that the creative urge in man is irrepressible and given the slightest vent, it emerges like a volcano.

To bridge the gap

There are indeed no simple solutions to the problem of unemployment or malemployment. It is, however, obvious that to increase employment and decrease malemployment, we would need to utilise our resources more optimally and towards more worthwhile social objectives. And, it would be necessary to erase and eradicate job hierarchies. Excellence everywhere must be appreciated and compensated for adequately. We believe that maximum salary differential between the lowest and the highest salaries in the same organisation should not be more than 2- to 2.5-fold.

To encourage creativity, greater support must be provided to handicrafts. Our educational system must lead to dignity of labour and respect for craftsmen. Middlemen must cease to play the dominant role they play now in marketing the products of the labour of our craftsmen. There should be greater recognition of creative endeavour of a high order in all areas including sciences and arts. This would mean restructuring our bureaucracy which, being entirely impersonal, is a greater homogeniser of excellence and mediocrity, and is thus the very anti-thesis of creativity. And, of course, education must be democratised so that there are adequate opportunities for not only just employment, but creative employment which utilises optimally the individual's potential, for all. Facilities and life styles should be such that there is reasonable leisure for people to think and to express their creative urge in diverse areas.

Health

The vision

Everyone has equal access to the best available medical and health care.

The reality

There is no doubt that, since Independence, medical and health facilities in terms of what *can* be done have improved vastly and kept pace with the rest of the world in many areas. While small-pox has been eradicated, malaria, tuberculosis and cholera which used to take a heavy toll of human lives have been controlled to varying degrees. The general death rate has come down, life expectancy at birth has increased and infant mortality has fallen, all dramatically. The best that is available in the country is often as good as the best anywhere in terms of expertise. We can do heart and neural transplantation, open heart surgery, in vitro fertilization (test-tube babies), embryo transfer, CAT scanning and wholebody NMR scan in the country on our own. Yet, the fact is that whatever medical and health care is available in the country today, is inadequate and not within the reach of every citizen; the average in this regard is extremely low when compared to, say, Europe. An average medical practitioner is unconcerned, incompetent, far from being up-to-date, often corrupt, and at the mercy of the drug vendors who decide what drug will be used. Thus, inspite of the fact

that the polio vaccines have been available for 3 decades, we have still not determined which vaccine – oral or injectable – is most suitable for our population. And protein-calorie malnutrition due to inability to purchase enough food, and iron and Vitamin A deficiency diseases, are widespread, as are various forms of gastrointestinal diseases. A vast population of Indians carry parasitic infection in their gastrointestinal tract.

To bridge the gap

The nation must, as soon as possible, embark on a massive vaccination programme to eradicate or control those diseases for which vaccines are available or are likely to become available in the near future. It is obvious that for such a programme to succeed, the vaccines must be produced within the country and enough research and development done indigenously to allow the country to keep up with the state-of-art in this extremely important area. It is incredible that inspite of forty years of Independence, we do not have a set-up which would allow us to have reliable epedimiological data about the country, which data is a prerequisite for any national vaccination programme.

Democratisation of education, protected water supply, adequate nutrition, basic sanitation and drainage, adequate toilet facilities and a guaranteed minimum health and medical care, are achievable objectives that are bound to help. We perceive no substitute to nationalisation of health services on the lines of what has been done in Britain.

We must do everything possible through the use of modern biotechnology, to develop cheap diagnostic kits the use of which could be taught even in schools. If we play our cards properly, and without delay, chances are that we will keep up with the state-of-art in this area.

We must do everything possible to establish the efficacy or otherwise of the large number of indigenous drugs that are used in various traditional systems of medicine that have been in vogue in the country. Even if out of, say, 2000 such drugs, 20 turn out to be effective, we would have won a major battle against disease. We should try to learn in this respect from smaller countries such as Vietnam where a selected number of indigenous medicines have become a part of the national pharmacopoeia, and the results of their use are being closely followed to see if the initial *prima facie* case for their use was truly valid.

Equality

The vision

The prevalent economic order is equitable. Individuals are not able to use money for themselves. Their income represents a just wage or remuneration for the quality/quantity of their effort. There is no exploitation of man by man for personal or class gain. There is an awareness that the destinies of all men are interlinked, and that every human being has certain inalienable rights which we must respect and which are not negotiable under any circumstances (thus, bonded labour, apartheid or other forms of exploitation, including exploitation of ignorance, cannot be justified under *any* circumstances. There is equitable social justice and recognition (in practice) of basic human dignity and rights. Corruption in public life has been wiped out.

The reality

Here, we have totally failed and there has been hardly any improvement since Independence in regard to economic disparities between the various classes. To the country, in some States such as Punjab, the rich have become richer and the poor, poorer. And we have thrown to the four winds the concept of inalienable human rights. Police atrocities, harassment and torture of the poor, the powerless and unprivileged by the rich and the privileged without fear of reprisal; bonded labour, corruption and exploitation of ignorance have been rampant to an extent that they hardly raise an eyebrow in the vast majority of our people specially the educated 'elite'.

To bridge the gap

There are no easy solutions. Perhaps, one way would be to identify the impediments and remove them one by one, and do what is obvious to remove the disparities. Solutions will probably emerge on the way. One of the culprits is the right to property. Curbs must be placed on this right. We have land ceiling laws but they are practised more in the default. Is there any land transaction in which money does not change hands illegally, without record or receipt? Corruption must be eliminated through setting of examples from above; adequate detection strategies must be worked out and penalties imposed without distincion. Money should not be permitted to make money in private hands. Should we at all allow interest on bank deposits, or pay dividents to a person who merely sits at home and has money to invest? Should we allow the current, disproportionate (scandalous) appreciation of the value of property as time passes by? Shouldn't all major (large-scale) means of production, specially of crucial commodities, be owned by the State, while encouraging private enterprise on a limited scale in a manner that no exploitation of one human being by another occurs? These are some of the challenges before us. And, there is no alternative to a total commitment, not in words but in action, to the U.N. declaration of universal human rights. Every school and public place or work place should display this declaration. Every child in every class should be taught and retaught this. Our media should publicise this declaration periodically, as a part of their social obligation. It is only when people are aware of their right that they will demand them, and it is only when they demand, they have any chances of securing them.

Social security

The vision

An individual is able to engage in socially useful and productive work as long as he/she can; in other words, there is no fixed retirement age. However, when he reaches a stage that he cannot work, he is protected by social security. This would be necessary for two reasons: *(a)* So

far joint families had provided social security after retirement; with the slow dissolution of this system for various reasons including increased mobility and diversification of opportunities, the society will have to find ways and means of taking care of people who can no longer work. *(b)* Life expectancy has increased and could easily go upto over 80; if a person is even then retired at 55, 58 or 60, even though he may be perfectly fit, and in fact (at least in some cases), at the peak of his career, the social security load that the nation or the society will carry could be so large that it would be unbearable.

The reality

If anything at all, there have been efforts to lower the retirement age, e.g., in Andhra Pradesh, in defiance of all reality. The only positive step has been an increase in the amount of pension in the case of a part of the organised sector, but with inflation, the unrealistic cost of housing and property, and the fact that most of the population in the country does not belong to the organised sector, the problem remains largely unsolved.

To bridge the gap

The rules of retirement must be revised, and alternative employment strategies worked out. The question of social security – eventually an unescapable obligation – will not arise until there is, say, over 90% employment, and the organised sector represents a substantial proportion of those employed. For this the employment in the agriculture sector would have to decrease many-fold without decrease in agricultural productivity.

Discriminations

The vision

Distinctions based on caste, creed, sex, age or nationality have ceased to exist.

The reality

The situations is certainly better than what it was in 1947. For example, the number of intercaste or inter-religious marriages has certainly increased, and there is much less social ostracization in such cases. The opportunities for women to come up in public life are unquestionably more than what they were in 1947 – in many cases, more than even in many of the developed countries of the West and in Japan. And, we are trying to take note of the young – and to come to terms with the fact that they should not be and cannot be taken for granted, and that creativity and wisdom are not prerogatives of age or sex. Yet, we have female infanticide in certain villages of Rajasthan, and bride-burning everywhere for inadequate dowry. The identity that we seek is first of the State to which we belong, or of the language we speak, the religion we were born in, our caste or sub-caste, our lineage or our social status. We hardly ever think of ourselves as Indians first and, therefore, have little national commitment.

To bridge the gap

Again, education of the right kind – education which is appropriately value-oriented – is the most powerful tool that we could use to remove distinctions based on caste, creed, sex, age or social status from the minds of people. Reservations in education and jobs must essentially be based on socio-economic considerations and not on caste or community as is prevalent today. Adequate support must be provided towards this objective by our legal and political system, so that those who practice discrimination based on circumstances of birth are brought to books expeditiously and appropriately. The legal and political machinery must ensure that the constitutional guarantees in this regard are implemented rigorously. It is, no doubt, possible to evolve a system that would ensure this.

Secularising

The vision

There is freedom of expression and belief, and no one is victimised for his personal belief as long as he/she refrains from using violence and as long as his/her beliefs do not compromise the legitimate freedom and dignity of other individuals.

The reality

We have done better than any other country in this regard, even though there is tremendous scope for improvement. Political victimisation continues – for example, the deliberate murders under the garb of 'encounters' by the police, have not stopped.

To bridge the gap

There will be no alternative to more support to people's watch-dog movements, such as the Peoples Union for Civil Liberties. The Government must work in co-operation with such movements and not think of them as adversaries.

Respect for the individual

The vision

Physical torture of one individual by another ceases to exit.

The reality

The reality in this connection is very grim: we only have to look at the Amnesty International reports to know the extent of torture that is practised in our country – and that too largely by the custodians of law. Beating of children in schools, and of wives in houses, continues to be common practice. Children of each of the authors have received such beating in their schools – and there was nothing that we could do except to take the child away from that school.

To bridge the gap

On one hand, law must be made more stringent and easily approachable and applicable; on the other, there must be more public vigilance and organised protest.

The legal system

The vision

The law keeps pace with time, becomes more international (and less parochial) in character, is implementable, and is implemented.

The reality

We have improved a great deal in regard to legislation, and so we have a legal system the root of which is based

in egalitarianism, democracy and reason. Yet our law has not always kept pace with time. We have, thus, not codified Muslim law. We still permit parochial educational institutions and have not been able to make constitutional amendments which will not permit of such institutions. Property disputes account for a vast majority of our court cases, and the dispensation of justice is time-consuming (just look at the backlog of cases in any court) and expensive; it thus favours the rich and those who deliberately defy the law. Even where our law is just and unequivocal, we have hardly been able to implement it. So child marriage and Sati goes on, with the custodians of law turning a blind eye. And we have set up no machinery to look into the future and produce the necessary legal safeguards before we are faced with the problem; for example, we do not have a law in regard to surrogate mothers or artificial insemination donors: we cannot say what the legal status of the child would be.

To bridge the gap

Property disputes will decrease if right to property ceases to be a fundamental right and speculation in property is prevented. That will allow more expeditious disposition of other cases. Means should be found for summary trials in certain types of cases. The Government and the people must recognise that it is generally the oppressed who are sinned against. Yet, they are the ones who cannot secure adequate legal help; consequently, their case is lost by default. Ways and means must be found to remedy this situation.

And we must have only one law for all the people of India, irrespective of their creed or caste. And we must set up a machinery that constantly reviews our laws in the light of the rapidly changing social, scientific and technological scene. This could be the responsibility of the Law Commission.

Peaceful co-existence

The vision

It is recognised that disputes shall always arise, but we have decided that we shall resort only to peaceful ways of solving disputes at all levels – from the individual to the national ways – which would preclude physical violence and armed conflict. There is thus freedom from fear of armed conflict and terrorism, and crime for crime's sake have been wiped out so that we are able to live in a society where personal safety is ensured to a degree that it ceases to be a matter of concern.

The reality

Although crime, largely for crime's sake, has not yet permeated our society to the degree it has in many societies in the more developed countries, and – barring certain parts – ours is still one of the safest countries to live in from the point of view of personal and individual safety, and although we have a social, political and historically determined commitment to nonviolence, there is much scope for improvement in this regard, and the conditions could certainly be said to have deteriorated in the last 10-15 years. The events in Punjab are a witness to this deterioration.

To bridge the gap

An indepth analysis must be carried out to understand the basis of the evolution of terrorism in the country – be they Naxalites or Sikhs. All causes for genuine complaints must be removed. Only when this has been done and duly publicised, the law can – and must – come down heavily on the real terrorists for whom, then, there should be no reprieve. And this all must be done in time, before the situation gets stratified and more or less permanent damage is done. A stitch in time saves nine. And it should be remembered that the case of every person labelled as a terrorist or Naxalite is not the same. A man who kills a landlord who kidnapped and raped his wife, because he (the 'killer') had no access to law, cannot be put in the same category as of a mercenary who shoots innocent people to create terror and unrest.

Vulgar show of opulence

The vision

A culture has developed where wastage and expression of opulence is held in check for fear of widespread public condemnation.

The reality

The feudal India of the pre-Independence era was characterised by vulgar expression of opulence and wealth. One only has to look at the available records of the private lives of the Rajas and Maharajas of the erstwhile princely States, or of the life styles of the rich and the privileged before Independence, to recognise the extent of vulgarity and wastage that was inherent in their life styles. All this continues unabated, excepting that its scope has been enlarged and the avenues diversified. So our five-star hotels are full – not by the foreign tourists but by the affluent Indians. We can even block a public road for a wedding. Worst of all, no one protests, for those who have the means to protest – the privileged middle class – dream to do the same!

To bridge the gap

Until we bring into the mainstream of public life, through education, employment and adequate social justice (including provision of the minimum needs), the 97% of our population that is educationally unprivileged today, show of opulence and wealth will continue.

Disparity in education

The vision

We have adopted a new information order in which collection, dissemination and receipt of information is not the monoply of only a minority.

The reality

Today, information and knowledge are the most important assests of any individual group or society. In a democracy everyone has an equal right to information. Education provides a tool to convert information into knowledge – during the process of education as well as during the rest of one's life. And, experience

within a framework of a reasonable set of values, allows one to convert knowledge into wisdom. Disparity in regard to information and knowledge creates the first condition for exploitation. Such disparity is the hallmark of contemporary situation in India. Consequently, education has turned into a tool of exploitation of the unprivileged 97% by the priviledge 3%.

To bridge the gap

As already mentioned, educational opportunities must be the same for everyone – that is, school education upto the high school level must be universalised and democratised. And right to information must be regarded as a fundamental right. (It was the denial of this right which was our greatest failure at the time of the Bhopal tragedy, and since then; for example, till today, people have not been made aware through official channels, of the possibility – even probability – that what had killed and affected people may not have been all MIC but also hydrocyanic acid generated from MIC).

Commitment to peace

The vision

Our survival has been ensured by elimination of the fear of war, appropriate and adequate protection of the environment, and control of population.

The reality

Fortunately, our commitment to universal peace has been total, and it is to our credit that no reasonable person anywhere would think of India in the role of an aggressor. We have also played an important role in the comity of nations as a torch-bearer of peace.

But we have failed miserably in regard to protection of our environment and control of population. We did not even consider environment worthy of a separate department in the Central Government; we merged it with a much larger department of forests. So even our forest continue to be depleted. Our wildlife is gradually disappearing and, with indiscriminate mushrooming of factories and industries without proper environment protection measures, there are many mini-Bhopals in the making.

And our population continues to grow.

To bridge the gap

Democratisation of education, and economic independence (for all) for which primary requisites are enough water and energy in the country, will be a prerequisite for the solution of the problem of environment and population control in the future.

Self-reliance

The vision

Our country is self-reliant in technology.

The reality

In regard to self-reliance, no developing country in the world has done as well in such a short period as India has since Independence. In fact, it would not be wrong to say that there are a few countries in the world today which would compare with India in terms of self-reliance – and this would include countries of the developed world. Much more impressive is the *change* that has occured since Independence.

Before 1947, India virtually produced no finished product. We imported even pins, clips, nails and needles, leave aside paper, crockery and cutlery, finished cloth (made from Indian cotton converted into cloth in Lancashire mills in England), cycles and radios. Today, India is the only country in the world where every item of consumer goods that one buys in the open market is made indigenously; the range and quality of these goods is comparable with what is obtained elsewhere in the world. We are rarely a few years behind in terms of marketing of new materials or products. True that all the steps that are required for the production or putting together of the final product are not always carried out in India, but the fact is that in many cases they are. And in every case, at least one step – the final step – is carried out within the country. So today we make cars, refrigerators, radios, television sets, telephones, computers and calculators, heavy machinery, electrical and electronic goods, textiles, watches, locomotives, aircrafts, drugs and pharmaceuticals, cosmetics, chemicals, instruments, steel, super alloys, fertilizers, and thus a wide range of items of every day use as well as highly sophisticated, high technolog items. Not only that, whereas in 1947 India exported no finished product at all, today it exports more than 150 different categories of finished products, including some highly sophisticated ones. In some areas of science and technology which did not even exist 30 years ago, such as computer software, India's capabilities are as good as anywhere else in the world.

Today, we have the expertise to do extremely complex jobs within the country with totally indigenous materials and know-how. We can build bridges and steel plants, and set up refineries to process crude mineral oil. It is, therefore, not surprising that even in the highly competitive international market, Indian firms have won major contracts of say 100 crores or above each, for sophisticated technological jobs in areas such as transportation or power generation.

However, all this has not happened without our having to fight forces both from within the country and outside that have been, in reality if not in appearance, opposed to our policy of self-reliance. This opposition has been garbed under different names (privatisation, open competition, cost effectiveness of imported products, quality, etc.) and at times we have fallen for the bait.

We adopted a rational and reasonable technology policy in 1983; this policy was contained in the Technology Policy Statement (TPS) issued by the Government in that year.

Unfortunately, we seem to have forgotten this statement, paying often only a lip service to self-reliance.

To bridge the gap

Our commitment to self-reliance must be real and total. We will do well to follow the TPS in spirit. We must guard ourselves constantly against inroads in our autonomy through uncritical and injudicious import of technology or its products – specially in the area of agriculture, health, biotechnology and consumer goods.

Scientific progress

The vision

The contributions of our scientists to world science have become commensurate with the size of our country.

The reality

For us to be able to assess properly where we are today in regard to science in relation to the other countries of the world, or in relation to where we were, say, at the time we achieved Independence, we ought to remember two things: *(a)* that we are the second most populous country in the world and, therefore, if we were equal to everybody else, our contribution both qualitatively and quantitatively should also rank similarly; and *(b)* that our population has doubled since independence and, therefore, mere doubling of, say, money available for scientific research, or of the number of universities, or of the number of people engaged in research and development activities, since Independence, would not mean progress. As it turns out, in terms of number, we have done phenomenally well since Independence. Today India has the third largest scientific manpower in the world, that is, people with a degree in science including, of course, medicine, engineering, and agriculture; we have thus over two million trained scientists. Only the USA and the USSR have a larger number.

One of the criteria of judging the output of scientific research quantitatively is to count the number of research papers that are published in standard, reputed journals. In terms of the number of scientific research papers published per year in about 6500 journals that are indexed in Current Contents (a journal is included in Current Contents only if it is of a certain minimum standard), by the scientistss working in the country, our country ranks amongst the first ten countries in the world. It probably publishes more of such research papers than all the other countries of the developing world, including China, put together! So much about quantity.

To assess quality in scientific research, one could either look at the impact of the scientific work done in the country or world science (that is, determine the extent to which we have been leaders and generated new ideas which have been subsequently picked up by other scientists around the world), or look at the impact of scientific discoveries on technological advancement (that is, determine the extent to which the scientific research done in the country has led to developments that would bring material benefit to mankind).

One way of judging the impact of work done by Indian scientists would be the recognition granted by the community of scientists around the world to Indian scientists. To determine the impact of scientific research work on technological advance, one way would be to look at the new process or materials developed in the country which have since then been widely used, or have led to self-reliance – that is, technological competence which makes it possible for us to do things ourselves without having to import the know-how from outside the country.

To judge the recognition granted to Indian scientists by the international scientific community, one could, for example, look at the number of Indian scientists elected to the prestigious foreign professional academies such as, the Royal Society of Britain, or the National Academy of Sciences of the United States, or the All-Union Academy of Sciences of the Soviet Union. So far, 28 Indians have been elected to 'the Royal Society: 10 between 1841 and 1947, and 18 after 1947. The contributions of the scientists elected have covered a wide range: physics, chemistry, various areas of biology, mathematics and medical sciences. In the area of astrophysics too, India has produced since Independence several scientists of world class. There is even a comet named after one of them: Vainu Bappu. And there have been scientists elected to the other societies named above too.

As regards the development of new processes, products or materials, unfortunately, India has made very little original contribution in this regard. Japan, a country certainly ten times smaller than India in terms of population, has ten times as many patents to its credit as India has; more than that, there are far more Japanese patents that are actually used than Indian patents. In fact, there are extremely few Indian processes, products or materials, which would be considered as an outcome of scientific research done in the country, that are today **used outside the country. One exception would be the Suri transmission, invented by the late M.M. Suri.**

In the final reckoning, therefore, even though our country has a highly elaborate infrastructure for science today – one of the largest scientific and technological manpowers in the world, and amongst the developing countries, the largest industrial output – there is a great deal of scope for improvement. If we remember that we are the second largest country in the world, we would **immediately recognise that our output, assessed qualitatively or quantitatively, ought to be much more than** what it is today, even if we have the limited ambition of being only at par with (and not *better* than) the developed countries of today. Moreover, the quality to quantity ratio in regard to scientific research output is not as high as it should be. One important reason for this is that we are not able to use the entire gene pool of our country. As already mentioned, education is still confined to a very small proportion of the population of our country. For over 95% of the population, it can be **said that no one in the previous generations or in the pre**sent generation has had the benefit of proper education, and it seems likely that their children will meet the same fate. The genetic capabilities of this group which represents a vast majority of our people, are no less than those of the small number of privileged people (less than 5% of our population) where everyone in the family is educated, has been educated and will be educated. In fact, one criterion or measure of intelligence would **be the ability to cope with an adverse environment generation after generation. Using this criterion, this group** of over 95% of our population which has been deprived for scores or even hundreds of years, which has not known education, and which has coped with far more **adverse circumstances than the privileged and edu-**

cated in our country have, could very well turn out to be more intelligent than those who are likely to read this article. If this group were given the same opportunities that were given to the educated group, it would have probably done much better in the area of scientific research than what the educated group has done presently.

To bridge the gap

We, again, come to the same conclusion: one of the most important needs in our country is of universalising education and of ensuring that there is no discrimination in regard to educational opportunities. It should be the right of every person born in the country to receive good, appropriate and meaningful education upto at least high school – that is, ten years of formal education. After high school, those who go into the academic stream must be highly motivated, and not merely seekers of degrees. Everyone who has the motivation and the ability, irrespective of his/her origin must have the opportunity to receive higher education so that we may utilise maximally our gene pool – our national genetic potential. If we can devise a machinery to do that, there is no doubt that India, with the background of its history and with the infrastructure for science and technology that it has today, can increase the quantity of output of scientific and technologial research as well as improve the quality to quantity ratio in this regard. And when that happens, India would have secured for itself a rightful place in the comity of nations for, today, a nation's status and standing in this comity is largely dependent on its status and standing in the field of scientific and technological research.

Other areas

The vision

The quality and quantity of the creative output of our countrymen in all other areas of human endeavour have become commensurate with our size and pioneering. And, we have learnt to utilise optimally our professional skills.

The reality

There has been a considerable and heartening revival of Indian classical music and dance since Independence. The opening of faculties of fine arts in several universities and of schools of architecture and design in the country, has given an impetus to those who have talent in creative activities such as music, painting, sculpture design and architecture. Yet, arts and crafts are not a part of the everyday life of the middle-class – excepting, perhaps, in regard to handloom cloth. Here, the middle class, that wields most of the power in the country, has much to learn from the unprivileged, for it is of the life of our rural and the tribal poor that art and craft, music and dance are an inseparable part.

To bridge the gap

We have no architectural policy at the national level, with the result that, for a country which gave us Taj Mahal, Ajanta and Ellora, Khajuraho and Konark, Madurai's Meenakshi Temple and Bijapur's Gol Gumbad, Dilwara Temples, Belur, Halebid and Fatehpur Sikri, the architectural monstrosities that dot the entire urban landscape in the country and are now beginning to invade even the rural areas, do not raise even a murmer of complaint.

We should make it mandatory for our public institutions to spend a certain percentage of what is spent on buildings; on arts and crafts. It is shocking that even though handloom curtain cloth costs less than half of mill-made curtain cloth, and handloom cloth is far more durable than mill-made cloth, hardly any of our Government or public sector buildings use handloom material. We have begun to recognise the need of associating scientists with various aspects of national development; I believe, there is a similar case for associating artists (in addition to architects), with every construction project in which public funds are involved. Our education should aid in the development of a culture in which aesthetics and beauty are integral components of everyday life. The way for such an integration was shown in our country thousands of years ago : we only have to rediscover it in the newer environment. We believe that every individual has an intuitive ability to appreciate and admire environment and objects that are beautiful and aesthetically satisfying, and derive inspiration from aesthetic satisfaction. Such an inspiration can reinforce the individual's motivation and thus, eventually, aid in increasing productivity.

Obscurantist ideas

The vision

Obscurantism and superstition have been replaced by scientific temper.

The reality

In a society like ours which has been primarily obscurantist (and in which the pressure of customs, convention, tradition and religion have been such that if one is left to develop from childhood to adulthood without any counteracting influence of appropriate education), one is likely to grow up steeped in obscurantist ideas which are difficult to replace later on. In our country today, unfortunately, the educated, the academicians and the scientists, are as obscurantist and superstitious as anyone else. Just look at the followers of the godmen of our country such as Satya Sai Baba, Mahesh Yogi or Rajneesh, or visit the home of anyone belonging to the above privileged categories – and you will be shocked at the irrationality and unreason that pervades their life due to their obscurantist and superstitious beliefs. It may be difficult to find a minister who doesn't have an astrologer, and it is not unusual for a godman to have a say in political decisions. And all this inspite of Jawaharlal Nehru who coined the term 'scientific temper', and the fact that scientific temper is one of our duties as a citizen according to our constitution.

To bridge the gap

The only permanent long-term insurance for getting rid of obscurantism from our society is to lay emphasis on the right kind of education. One of the professed objectives of education must be to equip the recipient to fight obscurantism of which he would otherwise be a

victim. Education, right from the beginning, should be science-and knowledge-based. The time has come when we must realise that if any action based on the dictates of religion, classical philosophy, dogma, custom, convention or tradition, goes against the basic, long-term, legitimate interests of the society at large, those in power must take steps to ban such action. The press and Governmental publicity agencies like radio, television and the State departments of information, can be highly effective in fighting obscurantism in the country

As many voluntary organisations as possible should be formed and supported by people who are fortunate to be emancipated from the shackles of obscurantism themselves. The approach should be positive, that is, propagation of knowledge and the creation of an environment which would automatically lead people to reject obscurantist ideas by virtue of their own logic. Popular science movements such as Kerala Shastra Sahitya Parishad (KSSP) must be fully supported. Science must be projected as a way of life, not a thing apart from it; organisations like KSSP and Kishore Bharati – and many dedicated individuals such as Arvind Gupta – have shown that this can be done. Such efforts must be fully supported. No obscurantist or superstitious activity must be permitted under the auspices of the Government or by those who run it, under the pretext of individual freedom.

Freedom of movement/communication

The vision

There will be adequate freedom and facilities for travel and communication.

Travel broadens one's vision, and rapid communication is essential for provision of - sometimes crucial – information in time (examples would be information on weather, including events such as the likelihood of a cyclone or sickness of a family member; and information about products and materials crucial for production). Both travel and communication also help break barriers between people.

The reality

There has been a communication revolution in the country since 1947, but the pace of change, rapid as it has been in absolute terms, has not kept pace with what is available in the developed countries. Thus, while it is true that radio and television are no longer novelties in our villages, a telephone is. The challenge is not only to provide enough telephones at low cost (today's costs are prohibitive in relation to the salaries) but to be able to provide TV, radio and telephone-linked services that would help people save time, resources and energy.

And travel, inspite of the phenomenal growth of rail, road and air travel facilities in the country since independence, is still beyond the reach of an average Indian — excepting, perhaps, the infrequent, uncomfortable, overloaded, unreliable public buses, or short-distance rail travel. Moreover, travel for pleasure or to broaden one's vision is within the reach of less than 3% of the population.

To bridge the gap

(a) The country should embark on a crash programme for provision of telephones; this would involve not onl[illegible] increasing indigenous production by orders of ma[illegible] nitude in a span of a few years, but also making the se[illegible] vice cheaper through ingenious use of existin[illegible] technologies and development of new ones. The ult[illegible] mate objective should be that every household an[illegible] office has a telephone; the immediate objective coul[illegible] be that every citizen has easy access to a telephone.

(b) A package of useful telephones, TV an[illegible] radio-linked services should be worked out within [illegible] framework of a mechanism that would ensure that the[illegible] utility is constantly monitored and the required change[illegible] made expeditiously

(c) Public transport must be made cheaper, safer, fa[illegible] ter, more frequent and reliable. This would not be pos[illegible] sible unless we develop cheaper sources of energ[illegible] cheaper materials, and new principles of operation. [illegible] massive R & D effort in these directions should b[illegible] launched.

(d) More and cheaper facilities should be provided fo[illegible] those who travel. It could, for example, be made man[illegible] datory for petrol bunks to have clean toilets. An[illegible] today, in the country, cheap accommodation mean[illegible] dirty accommodation. A culture should be develope[illegible] through education, in which cleanliness becomes [illegible] habit, unrelated to expense.

Conclusio[illegible]

The question at the end is not whether it all can b[illegible] done, but do we want to do it ? Our dictionary is surel[illegible] incomplete, and the recipes can no doubt be improve[illegible] but what we are certain is that we have all the ingr[illegible] dients in the country today for accurate diagnosis of ou[illegible] problems and for their solutions, except one: politica[illegible] social, economic, intellectual, moral and ethical integ[illegible] rity. And, we have no recipe for that. The prize must g[illegible] to those who can work out and implement such a recip[illegible] – that is, replace corruption with integrity in ever[illegible] sphere. □□□

Rs. 3000 crore investment in Growth Centres

An investment of the order of Rs. 2500-3000 crores i[illegible] envisaged over the next about five years for creatin[illegible] sound and efficient infrastructural facilities in selecte[illegible] Growth Centres in backward areas. The funds for thi[illegible] purpose will be found by the Centre, the States and th[illegible] all India financial institutions acting together.

The Government constituted a High Leve[illegible] Committee under the chairmanship of the Secretar[illegible] Planning Commission, in June, 1988 to formulate th[illegible] criteria and guidelines for the selection and location o[illegible] Growth Centres. The Growth Centres will be identifie[illegible] in consultation with the State Governments concerne[illegible]

Upswing in exports

Abid Hussain

The author here makes a comprehensive study of the export trends in the country in the recent past, duly supplemented by statistics and data. According to him our exports increased by 15.3 percent in rupee terms in 1986-87 as against a decline of 7.2 percent in 1985-86. He describes the overall export performance during 1986-87 as 'encouraging' but feels that in view of the disappointing export performance in 1985-86, exports in subsequent years will have to rise at a rate much higher than the stipulated 6.8 percent in the Seventh Plan.

INDIA'S EXPORTS INCREASED BY 15.3 per cent in rupee terms (10.4 per cent in US dollars) in 1986-87 as against a decline of 7.2 per cent (9.9 percent in US dollars) in 1985-86. The improved performance was significant in the face of a sluggish expansion in the volume of world trade in 1986 and declining world commodity prices for many export commodities. The principal commodities which contributed to this increase in exports include gems and jewellery, leather and leather manufactures, readymade garments, oil-cakes, cashew kernels, marine products, tobacco, raw cotton and coffee. There was a decline in the exports of tea, engineering goods, chemicals and allied products, ores and minerals, rice and sugar. There were no exports of crude oil in 1986-87 as these exports ceased from April 1985 due to the commissioning of suitable domestic refining capacity.

Highest increase

During the first nine months of the current financial year April-December 1987, exports, on a provisional basis, have shown a substantial growth of 24.7 per cent compared with an increase of 17.3 per cent in the same period last year. This is the highest increase in the first nine months of a year in the eighties. In terms of US dollars, exports were higher by 22.4 per cent as against an increase of 12.7 per cent in April-December, 1986. The commodities continuing to show good export growth during the first half of the current financial year (commoditywise details of which are available) are readymade garments, gems and jewellery, leather and leather manufactures, cashew kernel, iron and steel and marine products. The trend of declining exports of tea, iron ore, cotton fabrics, engineering goods and chemical and allied products during 1986-87 has been reversed during the current year. Exports of coffee, oil cakes, raw cotton, spices, unmanufactured tobacco, sugar and jute manufactures have declined during April-September, 1987.

In the plantation sector, the good performance in 1986-87 in coffee exports was largely offset by the fall in the earnings of tea. Exports of coffee in 1986-87 increased by 15.6 per cent on top of a rise of 26 per cent in 1985-86. While the increase in 1985-86 was effected through a larger volume of exports of 46.5 per cent, the growth in 1986-87 came from higher unit value realisation of 53.5 per cent in a buoyant world market. There was a fall in the value of exports of tea for the second year in succession in 1986-87. This was due to a decline in both the quantity exported (by 7.3 per cent) and lower unit value realisation in a stagnant world market (by 5.3 per cent). The share of tea in total exports thus declined from 6.5 per cent in 1984-85 to 4.4 per cent in 1986-87. In order to boost tea exports Government have constituted a committee to formulate a long-term strategy for the tea industry. Initiative has also been taken to raise a 'special corpus' fund of Rs. 100 million to help expansion of tea research activities in the country. The main effort is directed towards promotion of these exports in value-added form. The trend in the first half of the current financial year reveals rise in tea exports by 28.6 per cent due both to increased quantity exported and higher unit price realisation. However, exports of coffee during the same period have declined by 13.9 per cent due to lower unit price realisation of 27.8 per cent. With uncertainties clouding the quota scenario, efforts will be required to explore non-quota markets for increasing the country's coffee exports.

The share of exports of eight important agro-based commodities taken together (coffee, oil cakes, tobacco, cashew kernels, spices, sugar, raw cotton and rice) in total exports increased from 10 per cent in 1984-85 to 12.8 per cent in 1986-87. Exports of cashew kernels have more than doubled in the last three years from Rs. 1508 million in 1983-84 to Rs. 3206 million in 1986-87 due to both enhanced quantum of exports and higher unit prices over these years. During 1986-87, exports recorded an increase of 42.4 per cent, contributed by a 25.6 per cent rise in volume of exports and 13.4 per cent increase in unit prices. After a decline of 2.1 per cent in

1985-86, exports of oilcakes registered an increase of 39.7 per cent in 1986-87, on account of increases in export volume by 22.7 per cent and unit by 13.9 per cent. There was almost a three-fold increase in the exports of raw cotton in 1986-87 attributable to an almost five-fold increase in its volume of exports. Exports of rice and sugar declined by 16 per cent respectively, due to fall in the quantum of their exports

Volume growth

In spite of a volume growth of 6.5 per cent, exports of spices have declined in 1986-87 by 3.1 per cent in value due to a drop in unit price realisation by 9.1 per cent. Growth in exports of spices had more than doubled in the two years from Rs. 1167 million in 1983-84 to Rs. 2278 million in 1985-86 due to a steady rise in volume of exports and higher price realisation. Tobacco exports in 1986-87 registered a growth of 2.8 per cent as against a decline of 4.6 per cent in 1985-86, due mainly to a rise in volume of exports by 10.7 per cent. Global consumption of tobacco continues to be restrained by demand-related factors like anti-smoking curbs and restrictions and manufacturing developments which lessen the amount of leaf required per unit of product. In the first half of 1987-88 these agro-based commodities have displayed a mixed trend. While a rising trend is witnessed in the exports of cashew kernels and rice whose exports have increased by 10.5 per cent and 70 3 per cent respectively, exports of spices, oil cakes, raw cotton, sugar and tobacco have declined by 10.1 per cent, 10.9 per cent, 0.4 per cent, 52.9 per cent and 20.2 per cent respectively.

Marine products

Exports of marine products, a comparatively new and dynamic sector, recorded an impressive growth of 17 per cent in 1986-87 as against an increase of only 7.2 per cent in 1985-86. Its share in total exports has risen from 3.2 per cent in 1984-85 to 3.8 per cent in 1986-87. The quantum of exports from this sector has been rising steadily and the increase in 1986-87 has come from both higher volome of exports by 13.6 per cent and increased unit value realisation of 3 per cent. The decisions of the Government on deep sea fishing, specially for 100 per cent export oriented units, has thus elicited a good response from the exporters. In order to encourage exports of value-added products the Marine Products Exports Development Authority (MPEDA) has introduced a scheme for extending subsidy assistance (25 per cent) to seafood processors for the acquisition of machinery and equipment required for production of value-added shrimp. The rising trend continued during April-September, 1987, with exports recording a substantial increase of 43 per cent.

Iron ore exports in 1986-87 declined by 6.1 per cent as compared to a rise of 26 per cent in 1985-86. The fall in the value of exports was mainly due to reduced volume of exports by 6.6 per cent. A major breakthrough was achieved by the Minerals and Metals Trading Corporation (MMTC) in securing a foothold in China in the export of iron ore and in the export of iron ore concentrates to Japan. The decline in world steel demand and output and technology shifts against the use of metals in general are factors militating against strong growth of export earnings from minerals and ores. A major problem of the iron ore exporters is the high cost of mining equipment which has affected the viability of mining operations and made exports uncompetitive. The Government is, therefore, working out a new strategy to boost the exports from this sector, which is an identified thrust sector. The strategy covers the development of new mines, improvement and expansion of mining operations as well as port facilities, exploration of new markets, increase in exports to the traditional markets and making long-term arrangements with the importers. The trend in exports during April-September, 1987, shows an increase in exports by 11 per cent over the same period last year, due mainly to an increase in the quantum of exports

Marginal decrease

Exports of engineering goods recorded a marginal decrease of 2.6 per cent in 1986-87 as against an increase of an almost similar order in 1985-86. Exports at Rs. 8750 million in 1986-87 were thus lower than the peak level performance of Rs 9389 million achieved in 1981-82. The share of engineering exports in total exports has declined from 8.2 per cent in 1985-86 to 7 per cent in 1986-87. The trend in the current financial year is quite encouraging with exports during April-September, 1987, rising by 29.8 per cent. To step up exports of this key sector, Government has identified 35 engineering industries as thrust industries on the basis of existing production capabilities and export potential. Detailed export strategies for each of these products are being developed.

Exports of chemicals and allied products in 1986-87 decreased by 4.6 per cent as against an increase of 3 per cent in 1985-86. Exports in 1986-87 at Rs. 4745 million were marginally lower than the highest level of Rs. 4975 million achieved in 1985-86. The exports in 1985-86 were restrained by lower exports of rubber manufacture due primarily to lower offtake from the USSR There were lower exports also of refractory and processed minerals which is attributable to a sharp drop in baryte prices due to severe recession in the world drilling activities. Other factors which affected exports are import ban by Bangladesh on cycle tubes, and labour trouble and lockout in two major tyre manufacturing plants, affecting the overall exportable surpluses of the tyre industry. However, there has been retrieval of grounds in the current financial year with exports during April-September, 1987, recording an increase of 52.3 per cent over the corresponding period last year.

Commendable growth

Leather and leather manufacture exports also showed commendable growth over the last four years when these exports increased from Rs. 4146 million in 1982-83 to Rs. 7872 million in 1986-87. Improved performance during the last few years was partly due to the changes brought about by the Government in providing improved access to imported inputs needed in this sector. The increasing trend has continued during April-September, 1987, with exports recording an

impressive growth of 55 per cent over the corresponding period last year. A significant feature of the rise in exports of leather and leather manufactures has been the change in the composition of these exports with growing emphasis on finished leather and leather products. This has helped in realising higher unit prices for these exports. To give a fillip to these exports Government have set up a high powered Committee for providing single window clearance for export-oriented proposals of finished leather products. It is also proposed to set up a hides and skin development fund to be financed and operated by the Leather Exports Promotion Council for promoting development, fabrication and distribution of improved tools for tanning.

The performance of readymade garments, another dynamic growth sector, has been remarkable in recent years. Their exports in 1986-87 increased by 14.2 per cent on top of an increase of 31.4 per cent in 1984-85 and 11.9 per cent in 1985-86. Readymade garment exports in the last two years have increased from Rs. 9533 million in 1984-85 to Rs. 12183 million in 1986-87. The world market for cotton garments has become active during the last few years, perhaps on account of emergence of renewed consumer preferences for cotton made clothing. This trend in revival of garment exports has continued in the first half of the current year also when exports have recorded an increase of 55.6 per cent. Exports to the European Common Market and other quota countries have shown significant expansion, reflecting the more liberal market access as a result of the bilateral agreements negotiated under the latest Multi-Fibre Agreement (MFA) 1987-92. It is hoped that the various innovative measures announced by the Government in October, 1987, under the revised quota distribution policy for garments will strengthen export performance.

Thrust sector in exports

Gems and jewellery is an important thrust sector in exports. These exports have more than doubled in the last four years from Rs. 10148 million in 1982-83 to Rs. 20693 million in 1986-87, with exports in 1986-87 registering an increase of 37.7 per cent. The share of gems and jewellery in the total exports has thus gone up from 13.8 per cent in 1985-86 to 16.5 per cent in 1986-87. The rising trend has continued during April-September of the current financial year, when exports of gems and jewellery increased by 42.1 per cent. This impressive performance reflects, in part, good response of the industry to the measures aimed at improving access and terms for import of machinery and equipment. The facility for bulk import of diamonds has also been eased with bulk import licence being thrown open to the entire diamond trade. The first 100 per cent export oriented gems and jewellery complex in the country in Santacruz Electronic Export Processing Zone (SEEPZ) went on stream and the publication of an international monthly magazine on gems and jewellery was started during the year. As cut and polished diamonds continue to play a dominant role in the exports of gems and jewellery, the move by the MMTC to enter into joint exploration and mining of rough diamonds with African states is a step in the right direction in view of the indigenous industry's vulnerability to price changes of rough diamonds. Steps are being taken to increase exports of jewellery because of their relatively high value-added nature. A jewellery school has been set up in Bombay, while free trade zones in Delhi and Bombay have now modern jewellery manufacturing units. Further, the Government are also taking a close look at the provisions of the Gold Control Act and its administrative machinery with a view to remove bottlenecks in exports of gold jewellery.

Projects and services have also been identified as one of the thrust industries having a good export potential. Exports of projects and services, which comprise construction and civil engineering projects, industrial turnkey projects and consultancy services, have been quite important in the recent past. However, the boom in construction projects experienced after the oil price increases of the seventies has declined, because of the fall in oil revenues of OPEC members, intense competition in the Gulf and African countries and foreign exchange problems faced by many African countries. Nevertheless, the value of projects secured in 1986 at Rs. 5250 million was almost double the value of contracts secured in 1985 at Rs. 2650 million.

For turnkey projects the market is more diversified but the total value of contracts secured by Indian companies is very small. One of the major problems faced by Indian companies has been their inability to offer credit terms in line with those offered by developed countries. Similarly, the share of India in consultancy services in the international market is very small, though our companies have made a beginning in developed countries also.

Encouraging!

With a large endowment of technical manpower, India is in a position to offer total range of services, including process design, engineering, procurement construction, supervision commissioning, project management and training in diverse fields like power generation and transmission system, petrochemicals, steel plants, textiles and infrastructure. There are about 200 consultancy organisations in the country, both in public and private sectors, which can provide consultancy for a very broad range of activities. Indian companies can also undertake operation and maintenance contracts. As a part of overall strategy to increase projects and consultancy exports, Government have announced various incentives like project assistance of 10 per cent of net foreign exchange earnings from service portion of the contract, market development assistance, information support and guidelines for export of services on deferred payment terms.

Overall export performance during 1986-87 and the first nine months of the current financial year has thus been very encouraging. The export-import ratio increased from 55.4 per cent in 1985-86 to 62.6 per cent in 1986-87. However, in view of the disappointing export performance in 1985-86, exports in subsequent years will have to rise at a rate even higher than stipulated in the Seventh Plan of 6.8 per cent per annum in volume terms. The drought in the current year may also

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Co-operatives need revamping

Dr. S.S. Khanna & S.K. Singh

Co-operatives can be an instrument of economic development particularly in rural India, says the author. The 5-year plans and Government emphasis on institutionalisation of distribution have given a fillip to this movement. Yet lack of co-ordination among the consumer co-operative institutions and Government agencies connected with production, procurement and distribution of consumer articles has prevented expansion of the movement to the expected level. Proper co-ordination coupled with a re-oriented area-wise approach can gear up the movement for better rural development.

CO-OPERATIVES AS AN INSTRUMENT OF ECONOMIC DEVELOPMENT of the disadvantaged particularly in the rural areas has received considerable emphasis during the successive Five Year Plans. As a result of the policies pursued under the Plans, co-operative movement in India has considerably expanded and diversified into various sectors of the rural economy. The Government emphasis on institutionalisation of distribution of inputs including credit, fertilisers, improved seeds etc., marketing of inputs and distribution of consumer articles has given impetus to the co-operative movement.

7th Plan strategy

The strategy for co-operative development under the Seventh Five Year Plan envisaged the following main tasks:

(a) Comprehensive development of primary agricultural credit societies to function as multi-purpose viable units;

(b) realignment of the policies and procedures of co-operatives to expand the flow of credit and ensure supply of inputs and services particularly to the weaker sections;

(c) Taking up of special co-operative programmes for implementation in the underdeveloped States specially in the North Eastern Region;

(d) strengthening the consumer co-operative movement in the urban as well as rural areas so that it can play a pivotal role in the public distribution system; and

(e) promoting professional management and strengthening of effective training facilities for improving the operational efficiency.

The Seventh Plan targets in respect of selected cooperative programmes and the progress made in their achievement are mentioned in Table 1 below :–

Table 1

Seventh Plan targets & progress of achievement

(Rs.crores)

Item	Seventh Plan Target 1989-90	1985-86 Target	1985-86 Actual Achievement	1986-87 Target	1986-87 Anti-achievement	1987-88 Target	1987-88 Anti-achievement	1988-89 Target
1	2.	3.	4	5.	6	7	8	9
1. Short term loans	5540	2800	2407	3000	2657	3200	3200	4800
2. Medium term loans	500	300	198	300	232	325	325	400
3. Long term loans	1030	600	530	650	579	750	700	850
Total Credit : (1+2+3)	7070	3700	3135	3950	3468	4275	4225	5250
4 Marketing of Agricultural produce	5000	3000	3537	3950	3885	4400	4000	4800
5. Retail sale of fertilizers	3400	1700	1442	2200	1457	2000	1800	2200
6 Value of consumer goods distributed in rural areas	3500	1700	1397	1900	1667	1900	1800	2000
7. Value of retail sale of consumer goods in urban areas	3500	1700	1471	1900	1764	2000	2000	2250

Cooperative credit

The progress in the disbursement of short-term, medium-term and long-term credit has so far been much below the Seventh Plan expectations. The shortfalls occured in most of the States, but it had been more pronounced in the case of Andhra Pradesh, Assam, Orissa, Rajasthan, Tripura, Uttar Pradesh and West Bengal.

So far as short-term and medium-term loans by the primary agricultural credit societies are concerned, the shortfall had been mainly on account of occurrence of severe drought and floods in many parts of the country which impaired the recovery of loans and resulted in mounting overdues. This in turn reduced the eligibility of credit societies in the affected areas for refinance from NABARD and led to serious set back in their operations.

The slow progress in the disbursement of cooperative long term credit has been due to number of factors. Minor irrigation which represents the single largest programme of long-term loans, has been, of course, doing well in some of the States, but there is need for diversification of the long-term loaning portfolio to include larger programmes relating to horticulture, dry-land farming, reclamation of alkaline and saline lands etc. Nevertheless the share of the cooperative banks under the IRDP has also been declining steeply during the recent years. The major constraint in the cooperative loaning programme for IRDP has been the absence of enabling provisions in the State Cooperative laws to waive the security conditions of land development banks so as to make possible lending for non-land based activities. Consequent on the implementation of the NABARD-I Project from 1.7.1986, the eligibility criteria for lending have been made more stringent. Out of 1851 primary land development banks, less than one-third are estimated to be having overdues, below 25% and thus eligible for unrestricted lending.

Problem of overdues

One of the major bottlenecks in the expansion of short-term, medium-term and long-term credit had been the continued existence of high level of overdues which ranged between 40 to 45%. The percentage of overdues to demand at various levels of cooperative credit structure since 1983-84 is given in the following table 2.

Table 2

Percentage of Overdues to Demand

(Percentage)

	1983-84	1984-85	1985-86	1986-87
1. Primary Agricultural credit societies	43 2	42 2	41 0	N A
2. Central Cooperative Banks	41 4	42 6	41 0	40 9
3. Primary Land Development Banks	43.0	40.1	39 8	43.9

With the exception of a few States like Haryana, Kerala and Punjab the recovery performance in all the other States had been unsatisfactory. The overdues had been particularly heavy in the Eastern and North Eastern States. The expansion of credit as envisaged in the Seventh Five Year Plan would not be possible unless substantial improvement is brought about in the overdues position of the cooperative credit structure at various levels. There is need for going into the reasons for slow progress of credit, identifying the various constraints and taking suitable remedial measures. In particular, there is need for undertaking case by case study of overdues and stepping up the recovery efforts. Stern coercive measures must be taken against the wilful defaulters. Along-side there is need to strengthen the supervisory staff to oversee the proper utilisation of loans.

The Seventh Plan had recommended for the integration of short-term and long-term credit in a phased manner. In Maharashtra, large number of primary agricultural societies have started disbursing long-term loans in addition to short-term and medium-term loans. The Andhra Pradesh Government has introduced the programme for integration of short-term and long-term credit structures at the primary level since January 1987. However, in case of most of the other States, very little progress has been made.

The Seventh Five Year Plan has also laid emphasis on increasing the flow of credit for dryland farming, pulses and oilseeds. The State Governments have been urged to improve the flow of credit for these special programmes on a priority basis. In order to step up the flow of credit for oilseeds production in the areas covered under National Oilseeds Development Programme (NODP), NABARD has opened a separate line of credit for the benefit of the oilseeds growers in such areas. However, only a few States are reported to have availed the special credit limits sanctioned by NABARD for the purpose.

Rehabilitation of credit structure

The cooperative credit structure in case of many States had continued to be weak. This had been particularly so in the Eastern and North Eastern States. In spite of the fact that the programme of reorganisation of primary agricultural credit societies into viable units had been completed in most of the States, there are still a large number of societies running under losses. Out of 350 Central Cooperative Banks in the country, 165 banks are reported to be weak and require rehabilitation. In the long-term credit sector, out of 19 State Land Development Banks, 10 such banks are reported to be weak. Out of 1851 primary land development banks/branches of Central Land Development Banks, hardly one-third banks are reported to be eligible for unrestricted loaning from NABARD and rest of the banks are eligible for only restricted refinance facilities. The capacity to extend further credit gets reduced in the case of weak credit institutions, afflicted with heavy overdues, for want of recycling of funds and lack of eligibility of refinance from NABARD. This underlines the need for revamping credit structure at various levels. A number of new schemes have, therefore, been introduced in recent years, with the help of NABARD, for rehabilitation and revitalisation of cooperative credit structure e.g., 15-Point programme for development of primary agricultural credit societies, 12-Point programme for rehabilitation of Central cooperative banks and 10-Point programme for revitalisation of land development banks. However, the progress in implementation of these schemes in most of the States has so far been slow.

Regional imbalances

There are great regional imbalances in the development of cooperative credit movement in the various States. The tempo of cooperative credit disbursement in the cooperatively under-developed States particularly in the North-Eastern region has yet to pick up and there is need to reorient our approach and strategy to suit the requirements of people in these areas. Taking into account the difficult terrain and lack of infrastructural facilities in the North-Eastern region, NABARD should adopt innovative approach and help in the preparation of schemes through their regional offices, suited

to their special conditions. The loaning procedures in case of these States should be further simplified and loans should be made available on much more liberalised terms and conditions.

Coordination with commercial banks

In the field of agricultural credit, the cooperatives provide nearly 47% of the institutional credit. The balance amount is provided by commercial banks and regional rural banks. During the recent years, the term loans by commercial banks for agricultural programmes have been picking up fast. It would be desirable that in areas where the cooperatives are weak, the commercial banks and regional rural banks should be made to supplement the efforts of the cooperatives in the provision of adequate agricultural credit. This underlines the need for bringing about coordination in the operations of various institutional credit agencies and keeping in view the local conditions, the respective roles of the cooperatives, commercial banks and regional rural banks should be specified.

Food production

In the context of the Action Plan for foodgrain production recently finalised for being implemented in 169 districts in the country, there would be need to bring about significant expansion in the disbursement of short-term, medium-term and long-term credit as well as distribution of fertilisers through cooperatives. Several measures need to be initiated by the State Governments immediately in consultation with the concerned agencies i.e., Regional Office of NABARD, Commercial Banks, Regional Rural Banks, Department of Agriculture and Cooperation. These relate to (i) Assessment of credit requirements of the farmers falling under the identified districts of Special Foodgrain Production Programme; (ii) Allocation of credit requirements among the Cooperative Banks, Commercial Banks and RRBs; (iii) Strengthening and revitalisation of the Cooperative Credit system especially of weak primary agricultural credit societies, central cooperative banks and land development banks. It is also necessary that NABARD's 15-point programme for development of primary agricultural credit societies, 12-point programme for rehabilitation of Central cooperative banks and 10-point programme for revitalisation of land development banks should be implemented in their right spirit; (iv) Assessment for each selected district, the nature of assistance needed to strengthen the Cooperative system in terms of :- (a) additional Government share capital contribution to the Central cooperative banks and primary agricultural credit societies; (b) managerial assistance by way of subsidy for supervision to the field staff; (c) Central assistance for non-overdue cover; (d) blocking of overdues of defaulters where necessary and the State Governments making good the shortfall in recovery.

Marketing through cooperatives

In the field of marketing of agricultural produce, the cooperatives recorded good progress during the Seventh Plan. The marketing of agricultural produce witnessed a big spurt due to large involvement of the cooperatives in the price support operations of the National Agricultural Cooperative Marketing Federation (NAFED) in respect of oilseeds, coarse grains and pulses and also the market intervention operations of NAFED in respect of potatoes and onions. It may, however, be pointed out that except in procurement operations, the share of the cooperatives in the total marketing operations of the country still continued to be small. There is a need to diversify their activities by handling non-traditional commodities of local significance but not necessarily covered under the price support scheme. In the oilseeds and rice production areas, cooperative marketing structure has to be geared up to provide needed support to the growers.

There are great regional disparities in the development of cooperative marketing among various States. Bulk of the turnover is accounted for by only 5 States of Punjab, Haryana, Kerala, Madhya Pradesh and Uttar Pradesh. There are large number of primary marketing societies in the country which are defunct and undertake very little marketing business. There is need to revitalise such societies. It may also be relevant to mention in this connection that with the conversion of Primary Agricultural Credit Societies into Multipurpose Societies, some of the Primary Agricultural Credit Societies, are making serious inroads into the marketing business of primary marketing societies and weakening them still further. This calls for specifically apportioning the relative roles of Primary Agricultural Credit Societies and Cooperative Marketing Societies in the marketing business in such areas.

Retail sale of fertilisers

The progress in respect of retail sale of fertilisers has, however, been much below the Seventh Plan expectations. The Seventh Five Year Plan had envisaged to increase the share of co-operatives in the fertiliser distribution from 47% in 1984-85 to 55% by the terminal year of the Seventh Plan i.e., 1989-90. The share of the co-operatives, on the other hand, declined sharply to about 35%. This has been partly due to stagnation in the credit flow and partly due to the drought conditions in several States, which adversely affected the off-take of fertilisers. Another contributory factor in this respect had been the severe competition from private traders. There is need for providing adequate margin to the co-operatives for fertiliser retailing. Wherever co-operative retail depots are available, the co-operatives should be given the first priority in the retail sale of fertilisers. With a view to improving the co-operative distribution system of fertilisers, it would be desirable that the Reserve Bank of India should make available adequate bank credit at reasonable rate of interest, which would enable the co-operatives to extend their role in marketing as well as input distribution. Additional retail outlets also need to be opened to meet the requirements of difficult and far-flung areas.

Cooperative storage

In order to equip the co-operatives with adequate godown facilities for promoting distribution of inputs and consumer goods and also to facilitate the marketing of agricultural produce, the Seventh Five Year Plan had

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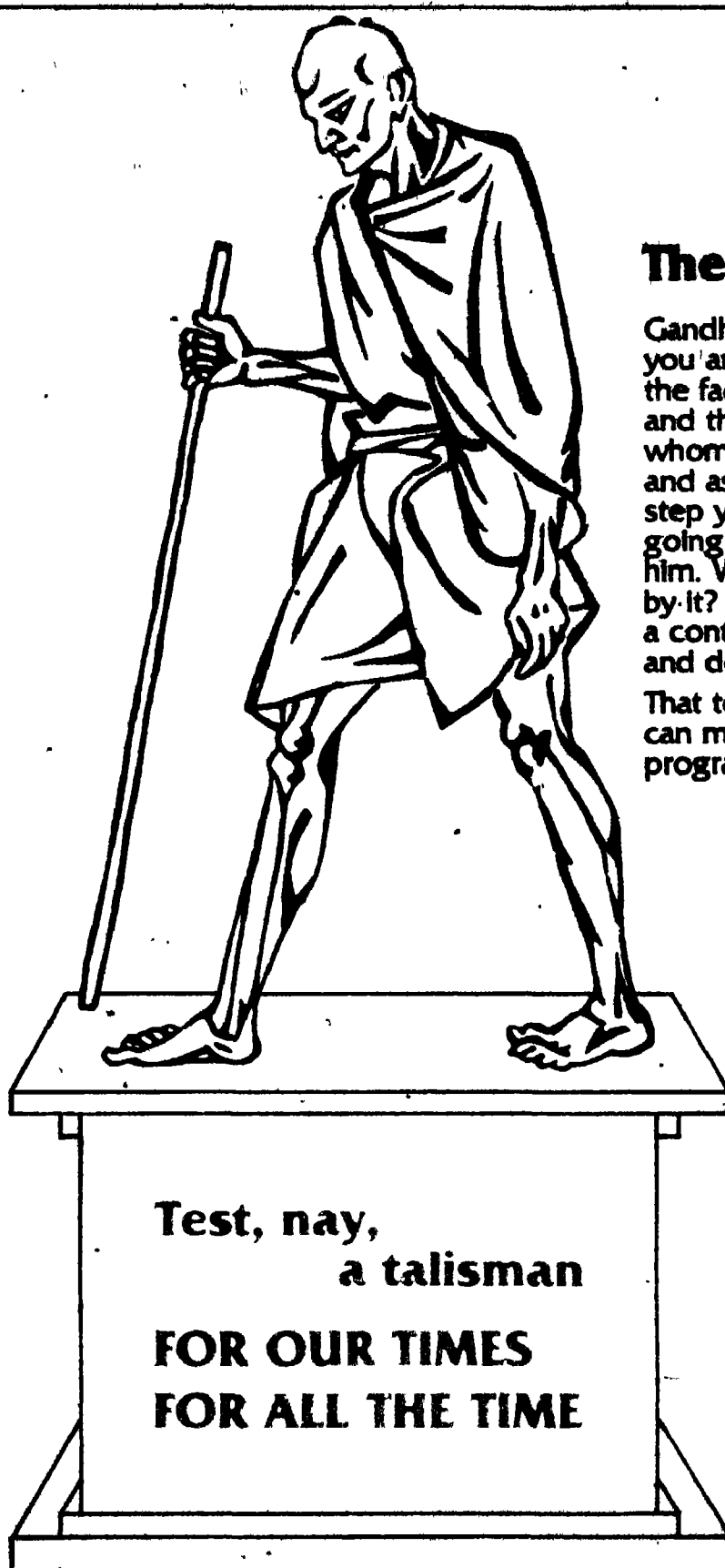

The Acid Test
Gandhiji said : "Whenever you are in doubt... Recall the face of the poorest and the weakest man whom you may have seen and ask yourself if the step you contemplate is going to be of any use to him. Will he gain anything by it? Will it restore him to a control over his own life and destiny?"
That test alone, he felt, can make our plans and programmes meaningful.
Test, nay, a talisman
FOR OUR TIMES
FOR ALL THE TIME
davp 88/350

Dairy farming and Operation Flood

P.K. Sharma & Sucheta Bhatele

While the Amul Cooperative in Anand, Gujarat, revolutionised dairy-farming in India, the Operation Flood I & II carried the revolution further into the rural India thus stimulating milk production and streamlining its marketing in cities and towns. Yet, the authors lament, the situation regarding milk production and its per capita consumption is not satisfactory. They, therefore, put forward some positive suggestions to make the dairying sector more meaningful and lucrative.

DAIRYING IS USUALLY CONSIDERED to be a profitable complementary enterprise in agriculture and constitutes an important activitiy for accelerating the rural economy of the country. The Indian Dairy Industry establishes off-farm activities of paramount importance, providing vast opportunities for gainful employment and income to weaker section of society.

India occupies 191 million cattle and 69 million buffaloes contributing about 1/6 and 1/2 respectively of total bovine population of the world. Milk production of the country has risen from 17-41 million tonnes in 1951 to 38.7 million tonnes in 1985. The annual growth rate achieved during the last decade was recorded to be about 5.5% per annum. The daily per capita availability of milk during 1985-86 has been reported to be of the order of 147 grams as against the estimated nutritional requirements of 210 gms, showing, thereby, the required production of 60 million tonnes of milk in 1981 and 67 million tonnes in 1985 in the country. Further, pointing out the fact that milk production in the country has fallen much short of both the current economic demand and nutritional, requirement and hence calling for greater concerted efforts to meet the future need of milk of the nation.

The need for Dairy Development is evident from the point of view of both the individual farmer and the nation. For the farmer, the establishment of a successful Dairy industry would mean a higher gainful employment with regular flow of income from the sale of milk and for the latter it would mean additional milk production, influencing positively the regular supply to the urban areas and milk processing plants as well as generating additional employment, especially for under employed who are in possession of scanty or no land in the rural areas.

A prospective plan for dairy development would necessarily have to be a total programme taking into account all the measures essential for the development of this enterprise, such a programme would include cross-breeding for producing high yielders, development of fodder resources, health cover provision for the animals, gradually culling for removing uneconomic stock and a proper marketing system for channelising the surplus production to the ultimate consumers and processing units in the urban areas.

Government project/programme

Recognising the need for increasing milk production in the country both the Central and State Governments initiated some or the other cattle development programmes in the past. Launching of All India Key Village scheme in 1951 was the first endeavour made by the Government for cattle development in the country. The scheme, however, failed to achieve the desired goals, due to lack of adequate inputs and the absence of organised milk marketing facilities in the intended area. It was, therefore, realized that greater coordinated and systematic efforts be made to increase milk production in the country.

The initation of Intensive Cattle Development Projects (ICDPs) in 1964-65 was another better planned and systematic effort conceived by the Central and State Governments for cattle development covering larger number of breedable bovines. These projects were designed to undertake cross breeding programme, providing health cover to the entire bovine population, development of fodder resources with a view to give feeding and initiated adequate milk marketing facilities through cooperatives in the project area. It was hoped that these projects would make a significant contribution in bringing about desirable benefits and socio-economic change in the project adopted area.

Operation Flood

The scenario of success of the dairy development of the country was changed with the progression of farmers-owned AMUL COOPERATIVE in ANAND,

Kheda district, Gujarat during the sixties with its integrated approach to the production, processing, procurement and marketing of milk based on cooperative lines. The ANAND PATTERN cooperative, was, therefore, realised as a model for dairy development in India. Realising the success of this veature the Government of India desired this pattern to be replicated through out the country. Consequently the Operation Flood I was launched in 1970 with the objective of setting up AMUL like organisation in several states, linking rural milk procurement points with urban demand centres, so as to stimulate its production and marketing. At the end of Operation Flood-I there were more than 13,000 Anand Pattern Dairy Cooperatives in 39 district level milk unions. These cooperatives collected 3 million litres of milk per day.

Enchanted with the success of Operation Flood-I, in October, 1979 Operation Flood-II project included organisation of a three-tier cooperative structure, i.e. at the producer, district and state levels as well as provision of tenchnical inputs and establishing processing capacities and marketing facilities in the rural milk shed through the cooperative structure. It is estimated that by the end of 1986-87 as many as 6.3 million farm families would have been organised into village cooperatives, encompassing in the ambit of this cooperative programme 9.62 million cows and buffaloes.

Milk production & consumption

Proper breeding, balanced feeding and scientific management of milch animals are major determinants of milk production. Table 1 illustrates year-wise milk production and consumption in the country.

Table 1

Milk production and consumption in India

S.No.	years	Milk production (million MT)	Per capita consumption (Av.gram/day)
1.	1951	17 41	132
2.	1956	19 72	135
3.	1961	20.38	127
4.	1966	19 37	108
5.	1966-70 (O.F.-I)	20.74	107
6.	1971-72 "	22.50	112
7.	1977-78 "	28.40	123
8	1978-79 "	29.10	124
9.	1979-80 "	30.20	126
10.	1980-81 (O.F -II)	31.50	128
11.	1981-82 "	33.30	132
12.	1982-83 "	34.70	135
13.	1983-84 "	37.10	141
14.	1984-85 "	38.70	144
15.	1985-86 "	41.00	147

Source: Ministry of Agriculture, Govt. of India.

Milk production and average daily per capita consumption in India have shown an upward trend since beginning of O.F. – I. Population explosion, however, did not permit the rising milk production of the country to go hand in hand on rational basis. The per capita availability of milk in the country, therefore, came down until before the start of O.F. – I. But the O.F. – I. as well as that O.F. – II had shown a better per capita milk availability with the quantity of 147 gms i 1985-86. Apart from operation flood schemes, othe dairy development programmes of both the Central an State Governments have also contributed to the stead improvement of the situation.

Anand pattern cooperative

The Anand Pattern visualises an intimate vertica integration between the primary dairy cooperatives an the federation in the field of processing, procuring, an marketing of milk and its products. The progress o Anand Pattern Milk Producer's cooperatives in India since 1970-71 have been presented in table 2.

Operation Flood seeks to present the instruments o progress in the hands of farmers themselves. Milk producer's cooperatives showing a steep rise in numbe since 1980, are being organised and strengthened. B the end of 1985 approximately 4 million farm familie got themselves enlisted as members of about 40,000 village milk cooperatives. At the moment, as many as 14 towns are beign benefited by the operation Flood II.

Rural milk procuremen

The first and foremost task of milk producers cooperative society is to organise milk procurement on moder lines in order to remove the bottlenecks, thereby reducing the share of the traditional middle-men

Table 2

Anand pattern village milk producer's cooperatives

S.No.	Years	VMPCs organised during the year	Cumulative VMPC organise
1.	1970-71	190	158
2.	71-72	223	181
3.	72-73	389	220
4.	73-74	398	259
5	74-75	368	296
6.	75-76	1567	453
7.	76-77	3148	768
8	77-78	1625	930
9.	78-79	793	1009
10.	79-80	1337	1143
11.	80-81	1834	1327
12.	81-82	5152	1842
13	82-83	5074	2349
14.	83-84	5118	2861
15.	84-85	5909	3452
16.	85-86	5477	4000

hitherto, operating milk marketing system. The efficient functioning of the village dairy cooperatives largely depends on the efficacy of procurement an handling of milk with apt attention to quality, quantity extent of spoilage and its check etc.

Since milk production shows a seasonal pattern in ou country, with yields almost doubling in the winte months, it should, rather be impreative for the cooperatives to purchase all the milk offered by rural producer during winter months. Since 82-83 a rapid rise in mill procurement has confirmed to the idea stated abov (Table 3).

Throughput of milk

Table 4 shows the supply of milk through Metr

Table 3
Rural milk procurement (Million lit/day)

S.No.	Years	Av. procurement durign peak flush months	Annual average procurement
1.	1970-71	0.65	0.52
2.	71-72	0.87	0.65
3.	72-73	1.05	0.76
4.	73-74	0.80	0.61
5.	74-75	1.28	0.87
6.	75-76	1.58	1.15
7.	76-77	2.19	1.55
8.	77-78	2.20	1.70
9	78-79	2.69	2.01
10.	79-80	3.31	2.36
11.	80-81	3.39	2.56
12.	81-82	3.93	2.78
13.	82-83	6.25	4.42
14.	83-84	6.32	5.21
15.	84-85	7.90	5.78
16.	85-86	9.30	6.50

Dairies to four major cities viz, Delhi, Calcutta, Madras and Bombay and a number of smaller towns of the country. This table further shows that in 1971 only 0.92 million litres of milk was processed and sold in these

Table 4
Throughput of milk Av. million litres/day

1	1970-71	0.91	0.09
2.	71-72	0.99	0.09
3.	72-73	1.07	0.10
4.	73-74	1.05	0.12
5.	74-75	1.07	0 13
6.	75-76	1.33	0.21
7.	76-77	1.60	0.29
8.	77-78	1.68	0.47
9.	78-79	1.80	0.55
10.	79-80	1.94	0.64
11.	80-81	2.18	0.61
12.	81-82	2.36	0.92
13.	82-83	2.59	1.18
14.	83-84	2.77	1.52
15.	84-85	2.95	2.06
16.	85-86	3.10	2.30

cities and other towns in an organised manner. An estimated 3.1 million litres of milk was supplied to these major cities and 2.3 million litres in other cities and towns during 1985-86. This indicates a radical change in the climate of milk rationing, thereby, capturing commanding hights in milk marketing of the country. (Table 4)

Suggestions

After independence, the milk industry though has undergone radical change, but the situation regarding milk production and per capita consumption is still far from satisfactory. The Government is watchful of the situation and is making enormous efforts to meet the requirement. The role of private dairies working under strict provisions of Act can not be ruled out. Following are some of the suggestions which can go a long way in bringing the dairy industry in the country to a more meaningful and lucrative enterprise.—

1. Recognising the need for increasing milk production, various dairy development programmes be initiated by the Government in rural sectors and increasing provisions be made by the Government to develop additional infrastructure for meeting the economic demand as well as nutritional requirement of milk in the country.
2. For accelerating productivities of milch animals, greater attention be paid by the Government to improving the indigenous stock of both cows and buffaloes.
3. The various operations be handled by technically trained personnel, who are supposed to be equipped with proper attitudes and behaviour towards the producers working in the supreme interest of the latter.
4. The milk society should be located in the nucleus area of operation for enabling maximum producers to pour the milk.
5. For having a continuous and proper interaction, communication links viz., roads and telephones etc. be properly developed in the area of operation.
6. For having the cooperative system to work more efficiently, greater and greater extent of loyalty, integrity and unstinted support of producers to the cooperative are essential pre-requisites.
7. For imporving and controlling the quality of milk and its consumption, mushroom growth of private dairies be checked by the Government, stringently observing the milk Act of both the states and centre. ☐

Technology Information Centre and Development Fund

Government proposes to set up an Industrial Technology Information Centre. The Centre will collect, analyse and disseminate information on technical and commercial aspects of industrial technologies from abroad and within the country. The revised estimated cost of the Centre would come to Rs. 4.75 crore.

Government also proposes to establish a Technology Development Fund. To begin with, the Fund will concentrate only upon the commercialisation of technology that have already been developed successfully upto laboratory stage. On the basis of the experience gained, the scope of the Fund will be widened to include activities, such as funding of specific R&D projects of national and industry-wide importance, provision of risk or venture capital, and co-financing of R&D expenditure on selected projects etc. ☐☐☐

Increase in TV Coverage

The TV service is at present available to about 72 per cent population of the country and this will increase to about 83 per cent with implementation of all the schemes included in the 7th Plan. Any further expansion would depend upon availability of resources under the future plans.

This was stated by the Minister for information and Broadcasting, Shri H.K.L. Bhagat in a written reply in the Lok Sabha in the last session. ☐☐☐

Generating employment through mini dairy

Dr. B.R.S. Chauhan & M.S. Sengar

Employment generation, particularly in rural areas, is the prime concern of our Government. Here the authors maintain that dairy enterprise managed on scientific lines can open new vistas for educated unemployed rural youths. As per their estimates, with an initial investment of just Rs. 43700, a person can get a return of Rs. 20000 per annum after some period.

DAIRY ENTERPRISE IS AN IMPORTANT OCCUPTION of Indian farmers. It is capable of producing enormous income and employment by way of rearing milch animal on scientific lines. It also provides milk, the indispensable food article, which is not only tha natural mine of rich nutrients but also an important part of diet necessary for physical and mental development of growing children, adolescents, expectant and nursing mothers. Dairy enterprise, therfore, serves as a vital contributory factory to economic and social development of the society.

Further, it is noteworthy that a bulk supply of milk in our country is provided by the small and marginal farmers and the landless labour. The dairy enterprise in India mainly being traditional the adoption of improved technological practices will certainly enhance the milk production. Apart from this, the inclusion of high yielding cross-bred cows in dairy herds will further contribute to the raising of level of benefits to the maximum extent.

In the recent past, it was recognised that scientific and planned "Mini Dairy Unit" was an effective tool to open the new avenues for increasing income and gainful employment particularly for the educated unemployed rural youths. With all these considerations in mind, this piece has been written to create an interest among the rural people, educated and unemployed youths and weaker sections for establishing planned dairy enterprise on scientific lines, provide opportunity for increasing income and empolyment , milk production to overcome the problem of short supply of milk and milk products and emphasise the replacement of the poor yielding indigenous herds of cows by high yielding cross-breds.

The following table clearly reveals that the cross-breds are economically much superior to the indigenous ones:-

Table 1

Sl.No.	Particulars	Indigenous Cows	Cross-bred Cows
1.	Average age at first calving.	4-4.5 years.	2-2.5years.
2.	Average milk yield/ lactation	175-400 litres.	2000-3600 litres.
3.	Average lactation period.	5-7 months.	9-10 months.
4.	Average dry period.	5-7 months.	2-3 months.

Capital investment

A mini dairy comprising 5 cross-bred cows will necessitate the investment detailed below in Table 2.

Table 2.

Sl No.	Particulars	Amt.(Rs.)
1	Purchase value including transportation charges of 5 cross-bred cows @ Rs. 600 per cow	30000.00
2.	Cost of single row cattle shed consisting of 400 sq.ft. floor area @ Rs. 20/ sq.ft.	8000.00
3.	Insurance charge for one year @ 4% on purchase value	1200.00
4.	Monthly recurring fund to meet the approximate cost of fodder and concentrates.	3000.00
5.	Transportation of milk and other articles.	700.00
6.	Cost of essential utensils.	800.00
	Total	43700.00

Economic viability

The details of income and expenditure are shown below in Table 3 and 4a and 4b respectively:-

Table 3 Showing income

S.No.	Particulars	Amount (Rs.)
1.	The sale value of milk @ Rs. 2.90/ litre assuming average yield of 3200 litres/cow under ideal feeding and management.	46400.00
2	The sale value of dung @ Rs 50/ tonne considering that each cow evacuates 2 tonnes of dung per year.	500.00
3	The sale value of one year old 5 calves . It has been assumed that 50% male calves and 50% female calves will be obtained and sold @ Rs. 200 and 1500 respectively. Thus the average sale value of each calf amounts to Rs.850 .	4250.00
	Total	51150.00

Table 4a. Showing indirect expenses

S.No	Particulars	Amount (Rs.)
1.	The cost of 365 qtls. dry fodder @ Rs. 10. per qutl. (The requirement of green fodder calculated @ 20 kg./cow.)	3650.00

2.	The cost of 90 qtls. dry fodder @ Rs. 30/ qtl. (The requirement of dry fodder worked out @ 5 kg./cow.)	2700.00
3.	The cost of 7317.5 kg. concentrate mixture @ Rs. 1.80/kg. (The requirement includes maintenance and production requirement @ 1. kg/day /cow and 1 kg. for every 3 kg. milk produced respectively. It also includes pregnancy allowance for 65 days @ 1.5 kg./cow/day).	13171.50
4.	The cost of rearing of 5 calves for one year @ Rs. 350 /calf	1750.00
5.	The cost of veterinary aid including the expenses of A.I.and medicines for 5 cows @ Rs. 150./cow and medicinal charge for 5 calves @ Rs. 25./day.	875 00
6.	Labour and supervision charges for one year @Rs. 20./day.	7300.00
7.	Miscellaneous charges for ropes, sanitation, lighting, watering etc @ Rs 150/cow	750.00
	Total	30196.50

Table 4 b

S.No	Particulars	Amount (Rs.)
1.	Depreciation value on the purchase value of cows.	2500.00
2	Depreciation value on the cost of cattle shed.	350.00
3.	Depreciation value in the purchase price of cycle and utensils	270.00
4.	The cost of repairing and maintenance of cycle and utensils @ 5% of the purchase value	75 00
5.	The cost of repairing and maintenance of cattle shed @ 2% of the cost of construction.	160.00
6	Interest on working capital @ 12.50% (Bank rate) far half of the duration of particular year	668.00
7	Rental value of land occupied by cattle shed for one year at the rate prevailing in the locality.	400 00
	Total	4423 00

NOTE: (a) The depreciation has been worked out by the formula given below:

Depreciation

Value =(Original purchase value of assets)-(its junk/salvage value)

(Expected age/Productive life)

(b) While calculating the interest on working capital, the money spent for fodder and concentrate has not been included because interest on these items has been included alongwith the amount of capital investment.

(c) Net Income = Gross income-Total expenditure
Rs. 51150.00-34619.50
= Rs. 16530.50

Repayment Schedule

Table 5

S.L.	Year	Net Income	Instalments of Principal Amount	Interest @ 12.5%	Total Amount	Net Saving
1.	I	16530.50	8740.00	4917.00	13657.00	2873.50
2.	II	16530.50	8740.00	3933.00	12673.00	3857.50
3.	III	16530.50	8740.00	2841.00	11581.00	4949.50
4.	IV	16530.50	8740.00	1639.00	10379.00	6151.50
5.	V	16530.50	8740.00	546.00	9286.00	7244.00
Total			43700.00	13876.00	57576.00	

It is evident from the Table -5 that the dairy owners will be able to repay the bank loan with interest within 5 years and will earn Rs. 2873.50, 3857.50, 4949.50, 6151.50 and 7244.50 in first, second, third, fourth and fifth year respectively. In addition to this, they will also earn Rs. 3650.00 as remuneration for labour investment each year. However, annually depreciated value of capital investment i.e. Rs. 3120.00 may also be treated as a saving of the dairymen. Accumulated amount of depreciation of five years can further be invested in dairy business cycling.

Thus it is concluded that a well-planned scientific "Mini Dairy" comprising five cross-bred cows is a profitable enterprise. After the fifth year, there will be aproximate net saving of Rs. 20,000 per annum. It provides full employment to one person regularly.

Technical bearings

The technical instructions cited below may be followed to make Mini Dairy Unit a success.

Procurement of cross-bred cows

The district officials of Animal Husbandry Department may be consulted to ascertain the availability of good and healthy cross-bred cows at reasonable rate. It is always safer and desirable to purchase lactating cows in first or second lactation. As far as possible, the purchase of dry and pregnant cows should be avoided. While purchasing the cattle, one should look into the availabe records of lactation period, dry period, calving interval, milk production, fat content, age at first calving and health. The purchased cattle should also be insured by General Insurance Company to cover the risk if any.

Financial resources

In case, the cattle owners fail to manage the finance required from their own sources, it may be borrowed from any commercial bank functioning in the vicinity for establishing the mini-dairy unit. The commercial banks lend money for the purchase of cattle, equipments, construction of cattle sheds and other inputs as term loan in cash credit account for a period of 3-5 years. The banks mortgage immovable property, pledge collateral property and hypothecate the dairy unit itself. They also require guarantee of two respected persons for the purpose.

Management of fodder

It has been confirmed that the regular feeding of high quality fodders like berseen, lucern, cowpea and other cultivated grasses throughout the year will not only increase the milk production but also bring down the cost of its production. The available dry fodder — wheat husk, Karbi and green fodder may be given in ratio of 1:3 to 1:4 to meet the requirements. It has been established that cows yielding 10 kg. milk per day may be maintained only on ad libitum feeding of leguminous fodders.

Feeding of concentrates:

The concentrates are required in general for proper growth, lactation and reproduction of milch animals. The quantity of concentrate required, depends upon the quantity and fat contents of the milk produced. Normally, 1 kg. concentrate mixture is recommended for production of every 3 kg. milk in addition to mainte-

(Contd. on page 34)

Saemaul Undong - for faster development

Arun Sedwal

In this paper, the author tries to give an insight into "Saemaul Undong", a popular community movement in South Korea. This movement is unique, he points out, as its approach is action-oriented and not theoretical. It has brought about rapid socio-economic transformation of South Korea. A programme on the lines of Saemaul Undong, the author maintains, can be experimented in India also to seek faster economic development.

SAEMAUL UNDONG, THE NEW COMMUNITY MOVEMENT, has changed the face of South Korea from a sleepy, poor country to a fast-developing and forward-looking nation. "The *Saemaul Undong* served as a hidden driving force which explored a road for the cultivation of the nation's destiny." This is how the movement was lauded by Chun Doo Hwan, President of the Republic of Korea, while addressing the *Saemaul* leaders in October, 1986. Indeed, this movement has been astoundingly successful in releasing the inner human potential of South Korea's masses for nation-building activities of multi-dimensional character. There can be no better tribute to this unique movement than the fact that upto May 1985, 26491 persons from 118 countries have visited South Korea to learn about the developmental process through *Saemaul Undong*.

Historical outline

The *Saemaul Undong* or New Community Movement, was devised and introduced by President Park Chung Hee in 1971, with the aim "to enable the Korean people to banish the dark legacy of the nation's past and to bring about national modernisation and development through integrated endeavours." This movement is of purely Korean origin which was started without any well-defined theoretical framework of high sounding ideology. Rather, it was guided by action and practice. There is no doubt that this unique character has been instrumental in its phenomenal success. It is only recently that attempts to theorise about *Saemaul* movement have been made.

The guiding principles

Saemaul movement is unique in the sense that shorn of theroetical concepts, its approach is action-orinted in a step-by-step manner, with three guiding principles central to the movement:

- DILIGENCE
- SELF-HELP
- CO-OPERATION

The movemnet is infused with the spirit of "CAN DO" or "We too can prosper if we work hard and cooperate with each other." It has a very strong undercurrent of patriotism which has eliminated the feelings of pessimism and created a sense of bright optimism and high morale among the Koreans. Another characteristic feature of *Saemaul* movemnet is that it was started in villages. Within three years by 1973, all 34665 villages in Korea came to take part in *Saemaul* movement.

Three phases

(a) *Creation of a Base (1971)*

In the first phase, the early projects were designed to improve the living conditions of individual families. The Government supplied the materials and the farmers, putting in their own efforts, repaired their homes, provided toilets, improved kitchens and roofs. This phase instilled the spirit of diligence and self-help and created a sound base for the movement.

(b) Improving Village Environment (1972-73)

In the next stage, a ten-point *Saemaul* project was launched with a view to improve the village environment. The villagers were encouraged to meet together, choose a *Saemaul* leader and carry out the projects which included widening of farm roads leading to villages, cleaning and innovation of streams and water reservirors, digging common wells, making common laundry places, common compost plots, common village halls and so on. Implementation of such projects all by themselves not only improved the living environment completely but also gave the villagers experience in organisational aspects of the cooperative way of working.

(c) Self-Reliant Socio-Economic Development (1974-75)

The third phase carried the movement further on the socio-economic plane, designed to boost the income of the villagers. Group farming, common seed beds, vegetable cultivation, pig, chicken and cattle farming, community forestation, common marketing facilities,

Saemaul factories, etc., were the type of projects taken up in this phase to improve the overall living standards of the villagers. This phase not only achieved the objectives set but also infused the spirit of "CAN DO" and a high degree of confidence as well as developed organisational skills among the people at grassroots level.

Multi-dimensional spread

After 1975, the *Saemaul* movemnet assumed multidimensional character. Larger projects concerning more than one village were taked up and the movement was also taken to large factories, urban areas and offices as a training vehicle to enable the people to solve their own problems, emphasising the basic philosophy that no citizen should be exculuded from a popular movement aimed at bringing about common prosperity. At this stage, the movement also shifted focus on righteousness and ethical values to uplift the spiritual well-being of the people. As a multi-dimensional vehicle of national development, the *Saemaul* movement generated benefits of the following kind:

i) Imporving individual family life.
ii) Improving village environment and community life.
iii) Enhancing income of the people for a higher standard of living.
iv) Creating harmonious relationship between the management and the workers for a healthy working environment.
v) Increasing productivity in farms and factories.
vi) Improving quality of output.
vii) Infusing a sense of patriotism and high morals and energize the people to put in their best in whatever work they do.
viii) Developing organisational skills, cooperation and mutual respect.
ix) Balanced growth between agriculture and industry.
x) Maximising efficiency.

Organisation and achievements

Although this movement was sponsored by the Government it has been converted into a popular movement since 1980, with the Government support. At the headquaters there is Central Office which represents all non-governmental Saemaul organisations which include *Saemaul* Leader's Association, Central Federation of *Saemaul* Women's Clubs, Factory *Saemaul* and the Central Council of Business and Office *Saemaul Undong*. There is a Central Counsultative Council chaired by the Minister of Home Affairs at the apex of the organisation. The following chart depicts the overall organisational hierarchy of the *Saemaul Undong:*

Central Consultative Council
↑
Provincial *Saemaul* Consultative Council
↑
Country *Saemaul* Consultative Council
↑
Township *Saemaul Undong Committe*
↑
Village Development Committee
↑
General Assembly of the village.

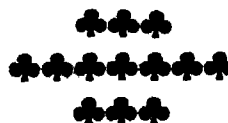
There are ten million *Saemaul Undong* workers all over Korea now, including 2.31 million women members and 0.97 million members of *Saemaul* Youth Clubs. There are also 0.91 million Saemaul Factory Workers. The aim is to cover 100% eligible population in the *Saemaul* movement by 1991.

Through 2,30,000 trained leaders, the *Saemaul* movement has brought about rapid socio-economic transformation of South Korea. The phenomenal rate of growth in agricultural and industrial sectors under the Korean Five Year Plans can, in a large measure, be attributed to the *Saemaul* spirit. Successful hosting of the Tenth Asian Games and 24th Olympics have been guided by the *Saemaul* movement. Through Saemaul Youth Associations, Saemaul libraries, *Saemaul* Technical Service Corps, *Saemaul* Sports Activities and many such programmes, *Saemaul Undong* is touching every facet of life in South Korea and preparing the nation for a big take off in the 21st century to make it a front-ranking nation in every way. This is the action-oriented spirit of *Saemaul Undong.*

Points for reflection

If there is a lesson to be learnt from the development experience of South Korea, it can be none other than *Saemaul Undong*. In a sense, the *Saemaul Undong* or New Community Movement, is close to cooperative movement in India and Gandhi Philosophy of *Ram Rajya* through self-help and cooperation among the people. Korean have achieved the miracle of fast progress by shedding the theory and putting these principles into practice in a very systematic way.

There is no reason why a programme like the *Saemaul Undong* cannot be activated in India, starting from the grassroots. Such programme can replace multiplicity of rural development programmes. However, it requires thorough dedication to the cause of the nation by one and all in a highly partiotic sense. Therefore, the success of such movement must depend upon a collective approarch, cutting across political and social affiliations.

High productivity and high quality of output, both are crucial needs in India. There can be no better vehicle than a programme like *Saemaul Undong* to achieve not only these goals but also to change total outlook of the people from despondency to creative optimism and energetic participation in the task of nation-building. □□□

(Contd. from page 17)

affect adversely exports of certain agricultural commodities. This has to be countered by an export push in other sectors. Improvement in export performance is essential not only to finance critical imports but also to keep trade deficit within manageable limits. □□□

(Courtesy: I& F.R.)

(Contd. from page 20)

laid down a target for increasing the co-operative godown capacity from 80 lakh tonnes to 100 lakh tonnes. By the end of 1987-88, the total storage capacity has increased to over 90 lakh tonnes. The good progress in godown construction was made possible on account of construction of storage capacity of 28.5 lakh tonnes under the IDA/EEC-assisted storage projects. There is, however, need for making fuller use of the storage capacity with the co-operatives.

Consumer cooperatives

The progress in the distribution of consumer goods in the urban areas as well as in rural areas, lagged far behind the Seventh Plan expectations. The Civil Supplies Co-operations set up in some of the States have been carrrying out the public distribution functions through their own branches and do not fully involve the co-operatives in this activity. The inadequate margins made available to the co-operatives for handling public distribution system articles and the absence of co-ordination among the consumer co-oprative institutions, Government agencies concerned with production, procurement and distribution of consumer goods also acted as constraints in the expansion of consumer business of the co-operatives. There is need for increasing the margins made available to the cooperatives for consumer business. The Reserve Bank of India should also provide bank credit towards working capital to the coopratives at a cheaper interest rate for undertaking consumer business. Wherever viable co-opratives are available they should be given preference in the distribution of consumer articles under the public distribution system.

The following issues would require larger attention in the years to come:

i) Study of the reasons for continued existence of high level of overdues and remedial measures for improved recovery performance;
ii) Rehabilitation and revitalisation of co-operative credit institutions at various levels;
iii) increasing the share of co-operatives in the IRDP lending;
iv) credit support to special foodgrains production programme;
v) increased flow of credit for special programmes like dryland farming, pulse and oilseeds;
vi) larger flow of credit in co-operatively weaker States and for weaker sections of the society;
vii) gearing up the co-operative marketing structure in the oilseeds and rice producing areas;
viii) increasing the share of co-operatives in the distribution of fertilisers and;
ix) strengthening the consumer co-operative movement in urban as well as rural areas so that they can play their due role in the public distribution system.□□□

AIDS HOW TO PROTECT YOURSELF

AIDS is a dangerous disease and so far there is no known cure fot it. So there are lot of rumours about it. But it is not difficult to protect oneself from it, provided some facts about it are understood.

WHAT IS AIDS?

AIDS stands forAcquired Immuno-Deficiency Syndrome. It is caused by a virus that destroys the body's natural defence system.

HOW IT SPREADS?

The only likely way for someone to catch the AIDS virus is from the blood or semen from an infected person to get inside his or her body.

Most people get AIDS virus by having sex with an infected person. The rest have it by injecting themselves using needles shared with an infected person as happens commonly among the drug addicts. Only rarely transfusion of blood from an infected person have been responsible for its spread.

Not everyone who carries the virus develops AIDS. In fact most will not. But anyone who has the virus can pass it on, even if they feel and look completely well.

YOU DO NOT GET AIDS FROM

— Normal social contact such as shaking hands, touching and hugging.

— Swimming pools, restaurants and other public places.

— Coughs, sneezes and spitting.

— Clothing.

— Toilet seats, door knobs, food, glasses and cups.

YOU DO NOT CATCH AIDS WHEN YOU :

Donate blood.

Have injections or any other treatment from your doctor, dentist or any other health care worker.

WHAT YOU SHOULD AVOID?

— Casual sex with strangers. It is always risky. You may not know that the stranger is an infected person.

— Anal sex. It involves the highest risk and should be avoided.

— The more the sex partners, the more the risk.

— Sharing injection needles with drug addicts.

REMEMBER

AIDS is not a disease to take risk with. There is no cure. AIDS control depends on how people behave.

FOR MORE INFORMATION:

You may write to Asstt. Director General (AIDS), Directorate General of Health Services, Nirman Bhavan, New Delhi—110011.

YOU CANNOT CURE AIDS BUT YOU CAN CERTAINLY AVOID IT

Issued by : CENTRAL HEALTH EDUCATION BUREAU
DGHS, KOTLA ROAD, NEW DELHI—110002.

davp 88/349 Eng.

BOOK REVIEW

Dairy Co-operatives

A Strategy For Rural Development: Dairy Co-operatives in India by R.C. Mascarenhas, Sage Publications, New Delhi; 1988, Rs. 190/-

Mascaranhas who is based in New Zealand and who has done earlier work on India has written an important book. This one deals with the working of dairy co-operatives in Karnataka. The author has specialisation in the sutdy of public enterprises and there is a definite stamp of his expertise in this study. He eagerly examines management intervention in this very important rural development programme. This rural development is through productive activity and not the usual subsidy programmes in the field.

The study was undertaken between July 1984 and March 1985. Bangalore and Mysore Unions were covered. Selected villages in the talukas were visited several times to understand the functioning of the dairy co-operative societies. The dairy co-operative project was taken up in 1973 with World Bank assistance. The objective of the programme was to develop an integrated programme for increasing milk production by organising milk collection, processing and marketing and by providing a set of technical inputs for animal health and breeding. Total cost of the project was Rs. 509.9 million. It covers four milk sheds in Southern Karnataka consisting of eight districts and 14,723 villages with 18,46,700 operational holdings.

Of a total of 1,850 dairy co-operative societies established by 1984, as many as 1,725 continue to function. Of these, 1,475 have made profits. The total producer members are 3,13,020 of which 42 per cent are small farmers, 26 per cent marginal farmers, 12 per cent landless labourers and 20 per cent others. The total annual milk collection has registered an average increase of about 49 per cent per annum during the period 1976-77 to 1983-84, largely on account of extension in the coverage. Animal health care, feed and fodder development, extension are methods employed in increasing the yield. The project has no doubt made considerable impact on changing the attitudes of people, moving towards commercialisation, enlarging employment and contributing to village amenities. In Karnataka, inferior groups have established a foothold against a powerful caste. More than 78 per cent of dairy co-operative societies members (with milch cattle) owned less than 5 acres of land. The dairy co-operative structure is 'alive and vibrant'.

The author concludes that the dairy co-operative project in Karnataka, modelled on the Anand type co-operative structure, combines a commercial approach with active producer participation. Though incomes generated from dairing reflect the existing socio economic inequalities, they however dispel the view held by critics that the new technology of cross-breeding favours only the large landowners. The lesson learnt is that social programmes can be better utilised with greater involvement and participation of beneficiaries. Through such improvements and 'empowerment', the rural poor can also protect themselves against the misuse of programmes by powerful groups.

The following have been emphasised by the author as strategy for rural development:

- the need for active participation on the part of the rural people in planning development programmes.
- greater emphasis on generating self-help through continous interaction and problem-solving.
- developing programmes that meet the needs, resources and capabilities of local people.
- the need for building constituency organisations accountable to local people.

Development through decentralisation and participation is emphasised. This reviewer is an advocate of this approach. The book has only strenghened his conviction.

The book should be read not only by those engaged in development of dairy industry, but by those engaged in the movement of rural development. Lasting rural development could be achieved through the development of productive activities of the people.

S.M. Shah

Agriculture

Indian Agriculture: A policy perspective by B.M. Bhatia, Published by Sage Publications India Pvt. Ltd., M-32 Greater Kailash, Market-I, New Delhi-110048, Pages 189. Price Rs. 140/-.

The green revolution has solved the food problem of the country. It has helped to keep the growth rate of food production ahead of the demographic growth rate of the country. The result is that we have comfortable level of buffer stock of food grains in the public sector. It is not enough to view agricultural policy in terms of the achievement of a certain growth rate in the farm sector or the attainment of national self-sufficiency in food supply and raw-materials for agro-based industries.

Contributing around 40 percent of the GDP and employing 67 percent of the country's labour force, agriculture remains the mainstay of Indian economy to this day. The fortunes of agriculture not only affect but actually govern the fortunes of national economy. This apart, rapid agricultural growth holds the key to the solution of the endemic socio-economic problems of rural

poverty and unemployment confronting the country.

Keeping its paramount significance for the economy in view, author in this book attempts to highlight problems and challenges facing the country in the development of agricultural sector and suggest policy choices and measures for accelerating the growth in agricultural production.

Production of foodgrains since independence has multiplied by more than three times. Such increase is quite significant but do not measure upto either size of the resource allocations in the plans for the agricultural sector, or to the expectations aroused by technological advance in the farming sector made in the mid-sixties. The rate of growth achieved has been too inadequate to make any significant impact on the problems of poverty, unemployment and hunger.

Apart from severe regional disparities, production growth in this sector has been accompanied by serious distortions in the cropping pattern.

While highlighting problems and challenges facing agricultural development, author describes the features of agricultural growth in the light of three broad heads: (i) sluggish and uneven growth of crop production and distortions of cropping pattern (ii) inter-state and regional disparities in growth; and (iii) agricultural growth and poverty.

He criticises severely the Seventh Plan document which, according to him, presents a wide gap between promise and performance, intention and action on the part of planning commission in regard to treatment of the agricultural sector in the plan. The author, however, has hardly emphasised or examined systematically the institutional, technological, financial, infra-structural, inputs supply and outputs marketing problems and themes of agricultural growth in the country.

The socio-cultural and attitudinal obstacles and practical difficulties in policies implementation and agricultural reforms have been grossly undermined.

The book, essentially a sophisticated theoretical exercise, revolves mainly around the theme of policy orientation, planning perspectives, policy choices in agriculture and regional disparities and distortion in cropping pattern in India.

Tushar Kant Mishra

AGRICULTURAL MARKETING IN INDIA, by S.S Acharya and N.L. Agarwal. Publishers: Oxford and IBH Publishing Co., New Delhi; Price: Rs. 28/-; Pages: 381.

In a country like India where agriculture contributes more than fifty percent of the national income and provides purchasing power for over seventy per cent of the population engaged in the production of crops, the marketing of agricultural produce plays an important role not only in stimulating production and consumption, but also in accelerating the pace of economic development. The agricultural situation in India, especially during the last two decades has undergone a rapid change. Investment in agriculture has risen impressively. Agricultural production, too, has registered tremendous growth, thanks to increased use of high yielding variety seeds, fertilizers, insecticides, pesticides, pumping sets and tractorization. As a result, the marketable surplus in the hands of farmers has increased substantially. In order to maintain this pace it is necessary to assure the farmers with remunerative prices and such an assurance could be given only by developing an efficient and effective marketing system. The benefits of technological progress should percolate down to the level of both farmers and consumers. This compels us to look deep into the marketing system and market structure for agricultural products.

The book under review reflects the research effort put in by Sri. Acharya and Agarwal and years of their teaching experience at the undergraduate and post-graduate level. Divided into eight chapters, the book examines the performance of the prevailing marketing system, institutions and policy in accelerating agricultural development in the country in a detailed fashion. After discussing about the basics of agricultural marketing – such as market and market structure, relevance of agricultural marketing in economic development, growth of agricultural marketing in India, features of an ideal marketing system, etc. – the authors have provided an elaborate description of marketing functions, agencies and channels, with special reference to agricultural products. Topics such as marketing of agricultural inputs, role of government in agricultural marketing and finally, the effect of training, research and statistics on agricultural marketing have all been discussed in a comprehensive manner, keeping the unique requirements of students in these areas.

The authors have handled the subject matter in a competent manner by digging up all available sources including books, research reports, and monographs published by various Universities and Government agencies. The subject matter has been graded in such a manner that all those interested in the welfare of farmers-students, teachers, marketing specialists and policy makers – could look into the performance of India's marketing system dispassionately. The book is liberally sprinkled with a number of informative tables containing latest statistical information. A very useful and highly readable book indeed for all those interested in formulating an unbiased opinion about the marketing system and market structure for agricultural products in India.

V. Suryaprakasa Rao

Planning

PLANNING IN INDIA – INDIA'S FIVE YEAR PLANS by G. RAKSHIT; Published by Sripati Bhattacharjee for the World Press Private Limited, Calcutta-700 026. First Edition, 1982; Second Revised Edition, 1986. Pages: ix + 192. Price: Rs. 30/-

Planning is crucial for any economy, be it socialist or capitalistic, although the process of planning is bound to be fundamentally different for the two. In the Indian context, planning assumes added importance in view of the resource constraints within which the economy has to operate.

This book deals with the various aspects of Indian planning, a subject which has received maximum cover-

age in the field of Indian economics. This is because in the absence of a central direction of economic activity, it would be difficult to bring about order in the different sectors of the economy which are closely interlinked. For every Plan objectives are laid down and outlays are allocated, but while evaluating the performance of the different plans, it is seen that targets are seldom achieved and the actual expenditure incurred has no bearing on the earmarked outlays. The author has aptly pointed out that 'planning requires a strong, competent and incorrupt administration' to prevent the planning process ending in chaotic situations.

Lucid and readable, the author has done a good job in recapitulating the salient features of the Indian Five Year Plans till date. An objective and comprehensive description based on facts and figures, highlighting the strengths and weaknesses of every Plan, has made the author's work rather meaningful.

This book is something more than a mere compilation of the seven Five Year Plans. The distinctive features of the second edition are the impact of planning on poverty, employment and population, trends in food production, price trends, etc , along with the objectives and strategy of Indian planning. The concise appendices on black money, Eighth Finance Commission and the monopolistic trends are useful additions.

The chapter on Stages in Plan Formulation, makes an interesting reading. However, the author is not correct in his observation that there is a common economic advisor to the Planning Commission and the Finance Ministry The roles of the Planning Commission and the National Development Council have been well brought out.

Although, the author does sketchily mention about Harrod Domar and Mahalonobis in the chapter on Strategy of Planning, a brief outline of the various models associated with different Five Year Plans, be it Harrod Domar, Mahalonobis or Leontief (static or dynamic), would have added depth to this book. This would make the book an almost complete guide to Indian planning and be of great help not only for graduate and post-graduate students but also for students appearing for competitive examinations.

Urvashi Sadhwani

Urban development

Management ideas for Urban Development: Dr. H.D. Kapardekar, All India Institute of Local Self-Government, Bombay 1987. Price Rs. 75/- pages 180.

It is estimated that more than half of humanity will reside in urban areas shortly after the turn of this century. Urban government management will, therefore, have to wrestle with problems of the greatest complexity in the years to come, particularly in the developing countries like India. The book rightly aims at improving the managerial concept and expertise in the vitally important field of urban government management.

The book covers basic ideas of management to the specific problems of urban government management. The author, being executive Director of All India Institute of Local Self-Government, Bombay is fully aware of the problems of urban management. It is a valuable book for the students as well as administrators working in this field.

Today there is need to improve working of urban management, particularly Municipal Corporations, Municipal Committees, Housing Boards, Water Supply and Sewage Boards etc. as they affect the masses most.

This book has tried to explain the management ideas including training, selection of men, material, methods of doing a job and motivation etc. as putforth by various thinkers and experts in this field. Today urban development is becoming complex day by day dealing from cradle to grave spectram of our life and this book is of great help in re-orienting our thinking and working to a more scientific or management oriented approach. The chapters are written in a crisp though small and lucid language. The illustrations have made the presentation more meaningful and clear. 28 chapters of the book, covers, more or less, all aspects of urban management. Some of these chapters are equally applicable in industrial and business management. Thoughts, concepts and ideas of as many as 26 celebrated personalities in modern urban management science have been discussed in this book. It is very essencial to have combination of welfare and business approach in dealing with urban management.

The urban manager of today, needs factual information about population, topography, existing network of services, social and political forces at work, the economy and how it operates and the organisational set up, the legal and financial frame work within which he has to work. To be effective and to satisfy the aspirations of the people, he has to increase the productivity of his organisation so that various services are developed, added and maintained, the selection of men, finding out best possible methods of doing the job, designing appropriate tools and implementations, training and motivating the personnel are the five steps in his work. The book examines various concepts and ideas required in this field for upright managers, with great depth and clarity.

S.K. Nayyar

Contributions to Post-Keynesian Economics – A Resume and Critique – S. Kishan Rao – Published by Sterling Publishers Private Limited – Price Rs. 80/-, pages 770.

The book, despite being the author's maiden venture into theoretical economics, makes "very interesting reading. While the book is primarily on Post Keynesian Economics, Shri Kishan Rao, in a very clear and concise manner, has explained the distinguishing features of different schools of Economic Theory. The first Chapter will be of immense help to the undergraduate student of Economics where the author exposes the different ideologies and thinking behind various schools of Economics varying from the Physiocrats, Classicals, Marxian, Neo classicals, Keynesian and Post Keynesianisians. To a layman who doesn't have a deep knowledge of mathematics, the book due to its simplicity of language and clarity of ideas will be of immense appeal.

Chapter III is of special interest to Indian readers as it exposes the relevance of Harrod Doman models to the Third World countries. Our First Plan was based on the Harrod Doman growth model. It may be mentioned that because of the universal characteristics of their strategic measurable variables of capital-output ratio and saving-income ratios the Harrod Doman model is applicable to all economic systems, albeit with little modifications. However, while the author praises Harrod for dynamising Keynesian theory, no mention has been made about his "second Essay on Dynamic theory" where Harrod by elaborating the supply side of his fundamental equation and introducing the role of interest rate in determining the supply and demand of savings has made his model more applicable to under-developed countries. The author makes no mention of the contributions of scores of Keynesian economists and Post-Keynesian, prominent among them is Prof. Franco Modigliani and Lawrence Klein. Modigliani's work on utility and consumption function is epoch making. Even though the nature of the present book is non mathematical, it was Klein whose book "Keynesian Revolution" has been a landmark. Klein's econometric contribution clarifies empirical basis of Keynesian operationalism for control and prediction has been ignored in this book

Nevetheless the author's book makes interesting reading in this fifty second year of publication of Keynesian treatise "General Theory of Employment Interest and Money."

Kirti Saxena

Insects

THE AMAZING WORLD OF INSECTS by U.C. Chopra; Publications Division; Price Rs. 11/- Pages 110.

This book appears to have been written for the general readers not acquainted with the subject

Insects have their own utility in Nature. If there are pests like cockroaches, flies, mosquitoes and rocusts, there is honeybee aswell which is an important source of food and nourishment in the form of honey. The butterflies delight us by their colours. Some of them have fantastic combinations. Insects like wasp are nuisance. They terrify the human being. Everybody wants avoid a wasp's sting but it kills a lot of insects to save our food. The dragonfly may look fragile but it is an accomplished aviator.

These interesting facts apart, the book suffers from a lot of shortcomings. It has no introduction. The illustrations are all unartistic. A little care in drawing might have made a difference.

The author points out that the vision mechanism of human beings and insects is a matter of mystry. This is not the fact. The principle is well known.

The chapters on scorpions and spiders are inappropriate. These species belong to the order of Arachnida and not Insects. These factual inaccurates detract from the book and may discourage the discerning readers.

S.M. Kumar

(Contd. from page 26)

nance requirement of 1 kg. However maintenance requirement of concentrate may be cut off if good quality leguminous fodders are included in the ration. The concentrate mixture should be composed of at least four or five components and 2% mineral mixture.

General management and veterinary aid.

In order to increase the level of benefit and make dairy unit a successful enterprise, one should bear the following points in mind.

(i) The lactating cross-bred cows should be given extra-care for a period of 40-90 days after calving.

(ii) The cows should be inseminated in mid heat.

(iii) If a cow does not conceive in three inseminations, it should be got examined by an experienced veterinary doctor.

(iv) The inseminated cows should be examined for pregnancy after 40 days of covering.

(v) One should consult the veterinary doctor for retention of placenta, irregular breeding and other sterility troubles.

(vi) They should be maintained on balanced ration and the available feeds should be served in order of pasturage green fodder-silage-hay and concentrate for economic milk production.

(vii) One should make proper provisions for cleaning of sheds and isolation of sick animals.

(viii) One should have proper record of breeding, feeding, production etc.

(ix) The animal should be timely vaccinated and treated for F.M.D., H.S., Anthrex, R.P., B.O. and other ailments.

Marketing facilities

The success of dairy enterprise depends upon the regular marketing of milk and milk production and availability of fodder and concentrate in the vicinity. As there is little demand for milk in rural areas at the site of milk production, the milk, should therefore, find a suitable outlet to urban areas. For the sake of convenience it may be marketed through milk collection centres established by the milk union/society/Government Dairy Department. It may also be sold directly to consumers in urban areas by managing their own transporting facilities. The fodders may be purchased from the surrounding locality and concentrate from the local markets. The ready- made balanced ration may also be purchased from the Milk Marketing Societies/Milk Unions through their collection centres. □ □ □

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Fiscal disciplining by Ninth Finance Commission

Mahesh Prasad

The Ninth Finance Commission set up by the Government in June 1987 submitted its report recently. Highlighting its salient features, the author here critically analyses the report focussing attention mainly on the normative approach in tackling the problem of mounting deficits on the revenue account of the Centre and the States.

THE SETTING UP OF A FINANCE COMMISSION once every five years for the devolution of Central tax proceeds to the States is a constitutional requirement. In fulfilling this constitutional obligation, the Ninth Finance Commission, constituted by the President on June 17,1987, was entrusted with the onerous task of adopting a normative approach in assessing the receipts and expenditure on revenue account of the States and the Centre. The direction to the Commission, it is obvious, was occasioned by the disturbing trends in the fiscal scenario of the country, marked by mounting deficits on the revenue account of the Centre and the States.

Normative approach

In its first report, covering the period 1989-90, the Commission has dealt with the problem at length, but adopted the normative approach selectively. A more rigorous application of the normative approach to an assessment of the revenue receipts and revenue expenditures of the Centre and the States would have to await the submission of the second report for the full five-year period of 1990-95. For the financial year 1989-90, the Commission has assessed the revenue receipts normatively, leaving the assessment on the expenditure side largely to the assumptions made by the Eighth Finance Commission This has been done with a view to allowing the Centre and the States to go through the period of transition smoothly and also because of the lack of data for undertaking such an exercise. However, after making a thorough assessment of the current situation, the Commission has indicated a good deal of its thinking, particularly on the question of expenditure on subsidies, and user charges for services, which have had an adverse effect on the revenue budgets of both the Centre and the States. In its first report, the Commission says, "We shall target the rates of growth of revenues and expenditures so as to end the revenue deficits by the end of 1994-95. The revenue deficit is to be phased out, partly by bringing down the revenue expenditure ratio (to GDP) through decelerating non-Plan revenue expenditure growth, and partly by increasing the revenue ratio."

Fiscal disciplining

The commission has estimated the resource transfers to the States for 1989-90, the terminal year of the Seventh Plan, to be of the order of Rs. 13,662 crore. The total volume of transfer, according to the report, is higher than what the States were receiving in 1988-89. The Commission has stressed the need for fiscal discipline at the two levels of the Government and said that in allowing for increased transfer of resources to the states, it had kept in mind the financial needs and resources of the Centre.

It has suggested that during 1989-90 the states should continue to receive 85 per cent of the proceeds from income tax. As for the excise duties, the existing arrangement under which 45 per cent of the net proceeds of shareable excise duties is distributed among the states, would continue in 1989-90 No departure has been contemplated in the existing practice in regard to the devolution of other taxes and grants. The recommendations of the Commission regarding devolution of income tax, Union excise duties, additional duties of excise in lieu of sales tax, grants in lieu of tax on Railway passenger fares, financing of relief expenditure and debt relief have been accepted by the Government. In regard to grant-in-aid, the Government has accepted the recommendation of the Commission with the proviso that the recommendation relating to grant-in-aid for meeting the requirement of revenue component of lthe State Plan may be kept in view by the Planning Commission while finalising the funding arrangements for Annual Plan of the States for 1988-89.

The Commission has re-assessed the total tax revenues of the Centre for 1989-90 at Rs. 49,000 as

against Rs. 46,874 crore given in Finance Ministry's estimate. On the non-tax side, the Commission has taken the figure of interest receipts at Rs. 7,662 crore and dividends and profits at Rs. 2,133 crore as against the forecast of Rs. 629 crore. In this regard it has voiced deep concern about low returns on the huge investments made in public sector enterprises, which should be "engines of growth" rather than a drag on Government resources. The Commission has suggested that possibilities should be explored for restructuring and phasing out loss making enterprises in the non-core sector by appropriate package of measures.

Containing subsidies

On estimates of expenditure for 1988-89, the Commission has concluded that subsidies must be contained if any dent is to be made on Centre's revenue deficit in 1989-90. Thus it limits the expenditure on fertiliser subsidy to 1988-89 level of Rs. 3,000 crore for 1989-90 against the Finance Ministry's forecast of Rs. 3,300 crore, food subsidy to Rs. 2,346 crore against a forecast of Rs. 2,530 crore, although considering the imperative need for encouraging export effort, it has considered the estimate of Rs. 1,200 crore for export subsidy as reasonable and accepted it. The Commission has re-assessed revenue expenditure on various items other than interest, subsidies and provision of dearness allowance at Rs. 22,561 crore as against the Finance Ministry's forecast of Rs. 24,414 crore. The growth rate in the forecast works out to 18.35 per cent, while the Commission has assumed a growth of 9 per cent over 1988-89 and called for belt-tightening and economy through a more rigorous application of zero-based budgeting and efficiency. On the basis of revenue estimates and expenditure, made by the Commission, the revenue deficit of the Central Government for 1989-90 works out to Rs. 7,994 crore or 1.92 per cent of the projected GDP of Rs. 4,16,854 crore.

Taxable capacity

Unlike the previous Finance Commissions, which assessed tax revenues of states on the basis of past trends, the Ninth Finance Commission has taken into account the taxable capacity of States. In cases where the tax revenues of States differ from the trend estimates, the Commission has attempted to reward States with better tax performance. This has been done by moderating estimates of tax by taking into account only 50 per cent of the difference between trend and normative estimates. Further, the Ninth Finance Commission has taken into account States' population living below the poverty line while deciding on the share of different states in tax revenues. For the earlier Commissions, the two major criteria that determined the States share were population and the degree of backwardness as reflected by the extent to which its per capita income fell below the national average. Thus the Commission has taken into consideration the difficult task that faces states with high poverty levels.

About loss of revenue arising from the introduction of prohibition policy, the Commission is of the view that the States following the prohibition policy should be expected to bear its costs. However to soften the hardship to these States, the Commission has partially taken into account the loss of revenue on account of prohibition policy.

Raising resources

The Commission is of the view that while pursuing special schemes, revenue-raising decisions should be linked to them. The Commission's remark comes, while dealing with the expanding social security schemes, such as old-age pensions, pensions for destitutes and widows and benefits for unemployed. While not detracting from the merits of the schemes, the Commission has expressed the view that the states themselves should raise resources to pursue the schemes. It would not be appropriate for them to export the burden of financing them to the people of other states.

The Commission's recommendations are based on a thorough analysis of the fiscal situation prevailing in the country. According to the Commission, the combined revenue receipts of the Centre and the States, which formed 6 to 7 per cent of the GDP in early fifties, have now reached the level of 20 per cent. There has, however, been a faster growth in revenue expenditure. The Commission notes that between 1974-75 and 1986-87, the total Government revenues increased 2.5 times in real terms and the revenue expenditure 3.2 times. Since the non-Plan revenue expenditure accounts for around 20 per cent of the GDP, the entire Plan revenue expenditure (at the aggregate level) has to be met out of borrowing. At the Central level, until 1985-86, the greater part of the rise in non-Plan revenue expenditure was accounted for by increases in interest payments and subsidies. Another cause for serious concern, the Commission says is the rapid increase in public debt in recent years, which has increased from Rs. 29,933 crore at the end of 1974-75 to Rs. 1,80,834 crore at the end of 1986-87, amounting to 61.8 per cent of the GDP. It is estimated to have reached Rs. 2,10,377 crore by March 31,1988. The consequent rise in interest burden tends to enhance the revenue deficit further, it adds.

Restoring health

After giving a detailed account of the malady afflicting the fiscal system in the country, the Commission says "the problem of scarcity of resources, however, cannot be solved through increasing revenue deficit, which is tantamount to living beyond one's means. The fiscal scenario in the country has gradually worsened to an alarming extent and corrective steps are required now to reverse the deteriorating trend and to create conditions for the restoration of health to the financial system."

The Commission's analysis of the situation, has led it to the conclusion that the increasing trend in Central revenue deficit is partly due to the significant increase in tax devolution and grants over the years. At the average rate of 17 per cent per year, the growth of current transfers, has been faster than the growth of

Central revenue receipts (14.4 per cent) as well as the States' own current revenues (15.7 per cent) during the period 1975-76 to 1986-87.

Arresting revenue deficit

Having analysed the situation, the Commission is confronted with the problem of identifying means by which the trend of rising revenue deficit at the Central and State levels could be arrested. While doing so, it comes to the conclusion that raising revenues to a level over 20 per cent of the GDP, which it has already reached and which is quite creditable for a country of India's level of development, would be increasingly difficult, although some increases in tax ratio may also be necessary. Also, it is of the view that the States do not have many productive sources of revenue, although it suggests that the States could "tap certain untapped sources such as taxation of land or income from land." It goes on to add "since their tax rates are already high, it is going to be difficult for them to get increases in revenue other than through obtaining higher elasticities in response to growth in income." It also wants sufficient emphasis to be laid on decelerating the growth of revenue expenditure of both the Central and the State governments.

The Commission lays down detailed norms in respect of non-tax revenues of States, the major sources of which are interest receipts and dividends, receipts from forests, mines and minerals, return on irrigation works and receipts from departmentally-run undertakings. On interest receipts it has reckoned receipts at 6 per cent on loans estimated to be outstanding at the end of 1988-89. On dividends from public sector undertakings run by the States, most of which continue to make losses, the Commission has suggested to the State governments to evolve concrete programmes of restructuring of enterprises to check the drain on exchequer. "Perennial budgetary support for undertakings in the non-core, non-promotional areas undermines our capacity to fulfil the national commitment to ensuring social justice," the Commission says. It has divided investments in these undertakings in three categories, namely promotional, financial and commerical and worked out dividends at zero, 3 per cent and 5 per cent respectively for the three categories. With regard to cooperatives, investments in Cooperative Banks (including land development banks), Credit Societies, Sugar Mills, Spinning Mills and other industrial cooperatives have been reckoned to generate returns at the rate of 5 per cent. Cooperatives engaged in processing, warehousing, marketing and housing activities and consumer societies are reckoned to generate returns of 3 per cent. No dividend has been taken into account from investments in dairy farming, fishermen societies, labour and cooperatives organised as part of the programme on Tribal Areas Sub-Plan. As regards royalty from mines and minerals, estimates made by the Eighth Finance Commission, suitably adjusted for price increases have been adopted. On irrigation receipts, the Commission has suggested that working expenses should be fully covered by user charges in 1989-90, while actions have to be initiated to recover higher returns during the Eighth Plan period. On return on investments in power projects, like the Eighth Finance Commission, the Commission, headed by Mr. Salve has assumed that the State Electricity Boards would yield a return of 7 per cent on the estimated outstanding loans (investments) advanced by state governments at the end of 1988-89. In regard to investments in State Road Transport Undertakings too the Commission agrees with its predecessor that returns should be 3 per cent, after providing for depreciation.

Table 1

Estimated Transfer To States in 1989-90

Sl. No	State	Share of Taxes and Duties Total	Grants (Non-Plan) Total	Total Col (1) +(2)	Percent to Total Col (3)
1.	Andhra Pradesh	848.70	52 81	901.51	6 60
2.	Arunachal Pradesh	65.30	85.90	151.20	1 11
3.	Assam	404.28	158.52	562 80	4 12
4	Bihar	1372.99	81 95	1454.94	10 65
5.	Goa	24 59	22.36	46.95	0 34
6	Gujarat	422.13	14.37	436 50	3 19
7	Haryana	137 05	27 76	164 81	1 21
8	Himachal Pradesh	140 46	113 98	254 44	1 86
9	Jammu and Kashmir	236 44	238 60	475.04	3 48
10	Karnataka	560.31	15.64	575 95	4 22
11	Kerala	404 41	6.61	411 02	3 01
12.	Madhya Pradesh	909 56	44 78	954 34	6 98
13	Maharashtra	860.47	56 50	916 97	6 71
14	Manipur	75.27	73.62	148.89	1 09
15	Meghalaya	59.67	52 07	111.74	0 82
16	Mizoram	72.52	97.97	170.49	1 25
17	Nagaland	73.38	97.78	171 16	1 25
18	Orissa	509.55	109 06	618.61	4 53
19	Punjab	184 22	94 39	278.61	2 04
20.	Rajasthan	574.68	76.62	651.30	4 77
21.	Sikkim	14 06	17.31	31 37	0 23
22.	Tamil Nadu	839.36	32.75	872 11	6 38
23.	Tripura	97.59	85 42	183.01	1 34
24	Uttar Pradesh	2046 75	116 67	2163.42	15 83
25	West Bengal	851 90	103 34	955.24	6 99
	Total (All States)	11785 64	1876.78	13662 42	100 00

The practicability

As stated earlier, the Commission has postponed a "rigorous adoption" of the normative approach to the Eighth Plan period. For this purpose it has commissioned some important analytical studies, entrusting one of them on "Estimation of relative Taxable Capacities of States" to National Institute of Public Finance and Policy. While it remains to be seen what norms the Commission decides for the full five-year period, it is doubtful whether some of the suggestions contained in its first report, though very realistic, would be found practical. Thus its suggestions to the States to tap higher elasticities in growth of income from land is bound to be viewed with scepticism in political circles, although the Commission has scrupulously avoided the term "agricultural income tax", which has been advocated by economists from time to time. About its recommendations on containing expenditure on

(Contd. on page 8)

Doing away with Benami Transactions

Kuldeep Singh Dhatwalia

The article traces the origin of the Benami Transactions Act, 1988 and provides an insight into the provisions of this progressive legislation. The Act, the author feels, is aimed at checking the criminal activity of benami transactions which deprive the State of revenue in the form of wealth/ income taxes. It is the necessity of the time and the author is optimistic that the Act would put an end to the age-old practice of converting ill-gotten money into solid assets through questionable means.

THE WORD 'BENAMI' MEANS WITHOUT NAME. Purchasing or holding of properties in the name of another is known as a benami transaction. The person in whose name the transaction is made is known as the 'benamidar'. The benamidar has the ostensible title whereas the beneficial ownership of the property vests in the real owner. This could be made clear by an illustration. 'A' purchases property by paying the price for it, but instead of putting his name as the owner of the property in the registered document, he purchases the property in the name of 'B'. In such transactions, A is called the real owner and B is the benamidar. Any specific motivation behind a benami transaction can be an attempt either to defeat tax laws or socially beneficient legislations or occasionally to shield money obtained by corrupt practices.

The property held benami was causing concern to the taxing authorities. The Government asked the Law Commission to examine the matter and give advice on the question of prohibiting the practice of holding property benami.

The Gajendragadkar Committee report

The Law Commission under the chairmanship of Justice P.B. Gajendragadkar submitted 57th Report on Benami Transaction in August, 1973. The 57th Report recommended that a separate law should be made where a person claiming to be the real owner of benami property can not file a suit in any court against the person in whose name the property is held. The person, who is a co-parcener in a Hindu undivided family or a trustee or another person standing in a fiduciary capacity were recommended to be out of the provisions of the new enactment. The Report also recommended that this Act will not apply in relation to any property held benami at the commencement of this Act.

The Government processed the recommendations contained in the Report. The matter dealt with in the Report related to a matter in the concurrent list in respect of which the State Governments also have power to legislate.

The ordinance

The President, Mr. R. Venkataraman promulgated the Benami Transactions (Prohibition of the Right to Recover Property) Ordinance, 1988 in May this year The Ordinance prohibited the right of the real owner of the property to recover it from the benamidar. It provided that no suit, claim or action to enforce any right in respect of the property held benami against the person in whose name the property is held or against any other person shall lie by or on behalf of a person claiming to be the real owner of the property. The Ordinance refused to recognise benami, character of transactions and in cases where property is held benami, benamidar would become the real owner. It excluded from its operation those cases in which benamidar is a co-parcener of a Hindu undivided family and the property is held for the benefit of co-parceners in the family or is a trustee holding the property for the benefit of another or for holding the properties in a fiduciary capacity.

It appears that as the Ordinance prohibited the right to recover property held benami, it was necessary to be brought forth as an ordinance. It is observed that whenever, it is decided to initiate legislation, the persons concerned manage to settle their affairs in the interim period between the date of introduction of the Bill and its passing in such a way as to defeat the very object of the provisions. This could, however, be prevented by the device of providing in the Bill that no person will have this right from the date of introduction of the Bill. As this would have been objected to on the face of it, it was decided to promulgate the ordinance.

The Government requested the Law Commission to take up the case of Benami Transactions (Prohibition of the Right to Recover Property) Ordinance, 1988 for detailed examination and give its views so that a comprehensive Bill to replace the Ordinance may be introduced.

The Desai Committee report

The Eleventh Law Commission headed by Justice D.A. Desai submitted One Hundred Thirtieth Report on "Benami Transactions-A continuum" in August, 1988. In "the course of future action indicated'-Chapter V of the report-it is mentioned that the Ordinance prohibits court action at the instance of the real owner against the benamidar or a defence based on benami on behalf of the real owner. If the benamidar and the real owner do not resort to court proceedings, the Ordinance does not affect their benami transactions. The Law Commission observed that the benami transaction is neither made illegal nor criminal. Voluntary retransfer of property by the benamidar to the real owner can defeat the purpose of the Ordinance or the Act replacing it. The Law Commission suggested that the real owner and the benamidar are participants in an activity apparently into a superficially viewed legal transaction but in reality into a criminal activity. Benami transaction is a criminal activity to shield the real owner from showing the property as his wealth tax, income tax or even the source of consideration with which the property was acquired. The benamidar is a mere name-lender without having invested a farthing in the transaction and thus a proceeding for acquisition of the property can be initiated. This approach would strike at the illegitimacy of transactions and now people will think twice before lending their name.

If the real owner cannot recover property and the ostensible owner has no interest in the property, obviously a provision can be made for acquiring the property without payment of any consideration. This will cover all benami transactions of the past, and for future, entering into a benami transaction should be made an offence.

Benami transactions are permitted with certain exception. It can be made in favour of wife and unmarried daughter, where either the father or the mother would like to buy a property in the name of unmarried daughter or the husband would like to buy the property in the name of wife. The husband or the father will not be entitled to reclaim the property on the ground that either the wife or the unmarried daughter was a benamidar.

The Benami Transactions Act

The Government introduced The Benami Transactions (Prohibition) Bill, 1988 during the Monsoon Session of Parliament. The Bill to replace the Ordinance was a comprehensive one on benami transactions touching all aspects and included some recommendations of 130 th Report of the Law Commission 'Benami Transactions-A contrinuum'. The Parliament passed the Bill in the same session and it has now got President's assent.

'The Benami Transactions (prohibition) Act, 198 makes entering into benami transactions an offence with the exception for the transfer of properties by th husband or father for the benefit of the wife unmarrie daughters.

The Act also provides that all properties held benam shall be subject to acquisition by the competen authority and no amount shall be payable for th acquisition of any such property.

The Act is a socially progressive measure which wi stop questionable transactions in property, prevent ta evasion and strike at the root of the sources c corruption. It will also have a powerful impact o speculation of property. The Act being a social legislatio can only try to minimise the evils being perpetrated. Th success of any social legislation depends on the attitud of the persons and the necessity and the circumstance in which a person is put to..

The Government has exorcized the very concept c the benami ownership and hopes that this age-ol practice of converting ill-gotten money into solid asset will just wither away. Tax-consultants and lawyers ar however, having a busy time studying the new measur and using a microscope to detect loopholes in it.

The Act is the necessity of the time. Today, parall economy has created a great threat to our developmen The black money is increasing in geometric proportion and the ditch between the rich and the poor is widenin Professor Kalder had made the following observatio

"As regards benami transactions, my suggestion is th the benami holder should be asked to disclose the nam of the beneficial owner at the time of registration and i the event of his failing to do so, he should be treated a the beneficial owner in law. My feeling is that th revenue would gain far more from screening all benan transaction at the very outset than it would lose fro any added difficulty in breaking the benami in the cas of such fraudulent transactions." ❑❑❑

(Contd from page 6)

subsidy and on the levy of user charges for variou services, the Commission itself has referred t suggestions in this regard by its predecessors, whic had hardly been heeded to. Although the Commissio has frozen expenditure on fertiliser for the year 1989-9 to the current year's budget estimate of Rs. 3,000 cror and suggested that increases in cost of production c fertiliser be compensated for by an increase in issu price, it is unlikely that it would be acted upon. It recommendation regarding appropriate user charge for the provision of irrigatin facilities, electricity suppl and transport services are likely to be received by state with similar apathy. ❑❑❑

Education: vital component of developmen

Dr. S. Nayana Tara

Describing education as a long term investment in human resource development, the author here calls for microplanning at block level to meet the need for highly specialised skills. In her opinion a block level mini-planning commission by reorganising the present block level system can ensure proper development of human resource.

IT IS NOW WIDELY ACCLAIMED that the need of the hour is for Human Resource Development (HRD). This is mirrored in the New Education Policy document. The document lays stress on Management of Education and aims at overhauling of the system of planning and management of education. While the goals are laudable the task of implementation looms large and some ways to achieve it have to be given a lot of thought.

Long term investment

To talk of Human Resource Development per se may not make much sense to a common man. It may be more meaningful to say that whether development is defined in monetary and/or real terms, it is essentially a human resource development process. The money that we invest on education is an investment in human resource development because these educated youth contribute to the growth of a country in times to come. It is a long term investment which may not fetch immediate gains. To achieve the goal of human resource development, planning at all levels assumes vital importance. In the context of rural development planning and management, it refers to augmentation of skills and capabilities of the functionaries charged with the task of planning, executing and managing rural development programmes as well as improving the skills and perceptions of the participants in the process.

Unskilled labour

There is already an evolved organisational structure working through formal and non-formal educational institutions which provide pre-service and in-service training and education programmes for the clientele. But a large portion of the potential labour force is not covered by this structure.

The policy document reports that 50 percent of workers in public sector who require technical knowledge/skills for their work do not possess it. The figure will be even more appalling in the rural sector. Similarly, 94 percent of workers engaged in all occupations do not have formal education.

Diffusion of innovation and optimum exploitation of block level resources in rural development in any sector of development such as agriculture, horticulture, sericulture, apiculture, silviculture, forestry, animal husbandry, rural industries, marketing, rural credit, health and hygiene, as well as the success of on-going development programmes under IRDP, whether anti-poverty or otherwise, and other programmes (e.g. RLEGP, DPAP, TRYSEM, ICDS, etc.) depend upon specialised roles and responsibilities which require minimum levels of skills and knowledge of human resources which are grossly inadequate at present.

Strengthening HRD infrastructure

For giving a scientific knowledge regarding the various developmental schemes to the beneficiaries, the formal and non-formal education has major role to play. For instance, for training in different skills, the clientele need a basic formal education, at least, lower primary education. In other words, a minimum formal educational threshold defined as the lower primary educational level is necessary for further scientific training in skills. This threshold varies depending on the skill to be acquired. The adult education centres and non-formal education centres can go a long way in imparting the necessary know-how regarding the various HRD schemes. This would entail bringing about of necessary curriculum modifications.

However inadequate it may be, there is already an existing infrastructure at the block level which needs to be strengthened, modified and refined to create the needed human resources and to utilise them. Illustration of users and producers of human resources at the block level are: The Taluk Development Board (TDB), the BDO and its extension machinery, the Lead Banks and other nationalised banks, the block level units of various development departments, the taluk agricultural and marketing boards, the agricultural, dairying, marketing and credit cooperatives, the handicrafts board, Khadi and Village Industries Centres, hospitals and health centres etc. Some of the users have their own education

and training wings. The others depend opon formal educational and training institutions which provide pre-service and in-service training programmes like periodical workshops, orientation courses, field demonstrations, seminars, conferences, project-meetings, refresher courses, extension lectures, radio and TV broadcasts, peripatetic training camps etc.

We have to examine the role of voluntary agencies for discharging some the functions described earlier. To make such agencies effective in HRD at the block level, its functionaries need training. Such training may be given by institutes like Indian Institute of Management or National Institute For Public Cooperation & Child Development (NIPCCD). A good liaison between voluntary agencies and the Government may go a long way in HRD at the block level.

Specialised skills needed

Each development sector operates specific schemes which require trained human resources for their success. For instance, the agricultural sector operates schemes such as development of local manurial resources, fertiliser promotion programme, high yielding varieties programme, multi-crop demonstration scheme, crop competition project, community nurseries on ragi, plant protection scheme, development of cotton, oil seeds, sugarcane, tobacco, pulses, organisation of agricultural fairs and exhibition etc. In this age of science and technology, we need to modernise the technology being used, as use of modern equipment is very essential. This requires personnel to be trained in highly specialised skills.

Elementary exercises in planning and management using conventional techniques are already being followed by various development and training agencies. These plans are now influenced by the vagaries of social demand. Their success depends upon the perceptive abilities and personal efficiencies of field-level executives rather than on mechanised channels of work and specialised training of functionaries.

Micro-planning

Invariably every block office in the country prepares and maintains annual block level plans. It has statistical assistants who conduct guided surveys for the purpose, coordinate their work with block-level agencies and assist the TDB, the BDO and other functionaries in preparation of plans. But this and similar exercises need still more advanced scientific techniques. Micro-planning at the block level is one such technique.

Monthly meetings, multi-level reviews, credit camps, coordination committee meetings, review committee meetings, etc., are some of the management techniques that are already in vogue. There are intersectoral as well as departmental efforts in this regard. It is imperative to consider the ongoing efforts in planning and management identified herein before a new model is suggested.

Surveys lack coordination

Block level planning, as it is true of all planning exercises, begins with multifaceted surveys and analysis of data from such surveys. Surveys of resources, needs, infrastructure facilities, supply and demand position and the balance achieved in this regard, potential for development, backward and forward linkages therein, conditions of success of plan efforts, clientele data etc. are essential components. The framework of analysis is provided by the national goals of development though flexibilities to suit the particular block will have to be built in.

Several such surveys are already being made at the block level but in an isolated way. Surveys to identify beneficiaries under anti-poverty and other development schemes, illiteracy and drop-outs surveys to launch non-formal education programmes, sample registration surveys, market surveys, credit sureys, command area bench mark surveys, and several other micro-surveys are in vogue. But there is no coordination among the various agencies in the use of these survey data either for planning or for management of total development efforts. Both vertical and horizontal coordination is essential for the success of HRD schemes. Similarly, though all India Educational Surveys which depend on block level surveys are being done for several years and compulsory Primary Education Surveys are being done in December every year, yet they are purely confined to formal education sector.

Mini planning commission

Educational mapping meaning thereby the location of infrastructure facilities and identification of skills among human beings and covering not just formal education but the whole gamut of informal, non-formal and formal training and education facilities has still remained a dream. This is the first step in planning and management of development of human resources Educational mapping is not enough. It has to be examined in the perspective of supply and demand of skills and knowledge required at the block level, availability of resources to develop the same, etc. For doing this, the educational map has to be integrated with the overall development plans and efforts as revealed from other sectoral and inter-sector surveys at the block level. There is no agency at present which can be entrusted with this task

There is a need for formation of a body/agency at the block level whose task is to look after the planning and management of development at the block level. The planning and management of education for development of human resources will be an integral unit of this body. Agencies performing such *umbrella functions* are essential at all levels, but here we are concerned with the blcok level. At the macro level the Planning Commission has been doing the job. The agency being thought of here will be the block level mini Planning Commission. It is not an agency which will be created out of a vaccum. By reorganising the existing block level system it is possible to create such a boday that is visualised here.

The education wing of this body in planning and management of human resource development may have

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Coordinating education and development

Prof. D. Mahanta

Probing deep into the causes of India's backwardnees, the author here emphasizes that education must enjoy the benevolent superintendence of economic management to become an effective instrument of socio-economic transfromation.. Simultanesouly, the author asserts, planning and plan implementation should be decentralised down to the block level, through the institution of Block-level Development Committee.

ON JANUARY 26, 1950 WE HAD THE PRIVILEGE of having our New Indian Constitution duly enacted and legislated. We were delighted to declare that all of us would henceforth be upholding the cause of an independent Democratic Republic and to promise that we would always be striving hard to attain the desired goals of the Nation.

From the economic point of view, the then socio-economic structure and the related situations were not quite suited to our constitutional 'Vision and so our 'National Government' at the centre could not but choose to follow, from the very beginning of long-term planning, a socialistic path of development; and that the Government actually did, with the necessary zeal and earnestness and with a view to achieving a better and happier standard of life and living for all our countrymen. We may recall in this connection that our country had previously been a land of a few 'Rajas and Maharajas' on the one hand and of the great mass of 'halfnaked Fakirs' and the penurious on the other. Such a state of affairs a newly born 'Democratic Republic' of the 20th Century could ill-afford to tolarate; and so Pandit Nehru, the first Prime Minister of Free India, proclaimed in a broadcast to the Nationa, on December 31, 1952, that the country would henceforth be aiming at a social philosophy which would seek fundamental transformation of the uneven structure of our 'Society' and struggle for a 'more equal society.' That society would in no way be dominated by the urge for private profit and/or individual greed and in it there would preferably be a fairer distribution of power to help build a classless society, based on co-operative enterprise and participatory effort.

As a nation suffering from poverty and deprivation, we immediately took to plans for economic development of the country. Following the theories, adopted in some of the advanced countries, the importance of science and technology as a major factor in economic development as well as in social reform was duly recognised by our National Government. Of course such types of thinking had also been there in the pre-independence days among the nationally-minded leaders of our country. India with a glorious past but with a chequered career of discontinuous growth and fragmented socio-economic structure had, after independence, to renew the hard struggle of building up the desired scientific base for all the developmental institutions and organisations. Leaders in the political field confirmed that faith in science and responded to plans drawn up to that end.

Plans in retrospect

On the eve of the First Five-Year Plan (1951-56), it was declared that the country should rather have an agricultural bias in its plans, because increase in production and promotion of self-reliance were considered essential for the country's progress So the economic planning that was resorted to during those days was more a scientific technique than an ideological procedure In other words, our long-term planning during the initial stage was a sort of 'Valueneutral' planning, It was believed, however, that *Socialism* was the inevitable consequence of a civilisation that would be based on scientific technology and inspired by humanistic ideals. Accordingly, a Scientific Advisory Committee to the Cabinet (SACC), was formed with eminent scientists from Institutions like Atomic Energy Commission (AEC), Council of Scientific and Industrial Research (CSIR), Indian Council of Agricultural Research (ICAR), Indian Council of Medical Research (ICMR), etc. The Scientific Policy Resolution (SPR) of 1958 could be well cited as a comprehensive statement of Government's intentions for the support of Science. Incidentally we may point out that there was also one Industrial Policy Resolution (IPR) of 1956, which broadly indicated the future trend of industrial development in the Country's long-term plans

But the SPR of 1958 could not evolve a suitable strategy for coordinating Science, Agriculture, Industry and Education with our economic planning as such, even though it resulted in a phenomenal increase in R&D (Research & Development) expenditure. Unfortunately, however, our dependence on borrowed technology and import of capital goods could not be reasonably reduced.

The Second, and the Third Five-year Plans greatly reflected a trend of thinking that of the two major sectors of our plan-frame (ours was a mixed economy, as we know), the Public Sector, and not the Private Sector, was more suited to the then leanings towards a 'Socialistic Pattern' of India's national development. It was intended by the Government of those days that the age-old capitalistic structure of Indian society should undergo a radical transformation into a socialistic pattern via the powerful working of the Public Sector. Of course the Public Sector enterprises could not be equated straightaway with 'Socialism' proper, becuase in such a situation there might be *economic growth* but the desired *equity* might be found wanting. In fact, that was what actually happened.

'Production' was given much more importance than 'Distribution', both in the industrial and the agricultural sectors. In agriculture, productivity foreran land reforms and in industry, incentives ruled the roost, at the expense of the desired soical reforms. An assessment of the situation done in 1962, showed that dominance of the rich and the influential had been continuing in all the plan-projects and the Private Sector kept on expanding at a faster rate. The 'gap' between the expected targets and the obtained outcomes caused a serious setback, even though the proportion of investment in the Public Sector as against that in the Private Sector was gradually being raised in the three successive plans, the proportion having been 46:54, 55:45 and 61:39 respectively.

Nothing hopeful turned out even in the next two plan-periods, namely, the three Annual plans of 1966 and the Fourth plan of 1969-74. It was also evident that no clear-cut policy would come out to assimilate science and technology with the production system in order to fulfil the plan ojective of growth, equity, modernisation and self-reliance. The nation's aspirations to bring about the desired quantum of socialism through effective links made between the production system and the distribution system did not thus materialise. In the meantime, however, some positive efforts were made to shape up the Banking Industry as an instrument of economic development and some fourteen big Banks were nationalised. Moreover the State Bank of India with its subsidiaries came out to help regulate the Banking Services, through the Reserve Bank of India, for priority sectors of the country's development plans. In other words, the so-called 'class-Banks' were, to a great extent, made to work as 'mass-Banks'.

Immediately after the expiry of the Fourth plan period, there was a political upheaval in the country and an emergency was declared by the then Central Government. Of course, even during that emergency period, the Fifth plan (1974-79) was in operation and a few extra-ordinary development measures, like the 20 point programme, were undertaken towards implementing the Government's newly accepted policy of 'Eradication of Poverty' (Garibi Hatao).

Eventhough the dream of a socialistic pattern of Indian Society visited and revisited us many a time during the first two decades of planning, it was only in 1976 that we could officially pledge owselves, through the 42nd Amendment to our Constitution, to the long-awaited goal of 'Socialism'. That newly declared goal of 'Socialism' must have made us feel elated and elevated, happy and hopeful, at the prospect of a pleasant and prosperous life in a secured state of solidarity.

The series of long-term plan that we had launched in the process were all oriented towards satisfaction of our 'needs' on the one hand and towards fulfilment of the domimant aspirations on the other. The coveted socialistic goals that were thus held out before us by our National Government were indeed praise-worthy, but the actual outcome of our economic planning did not turn out to be so satisfying. The resultant gap between the prospects, the targets and the concrete achievements obviously left us disappointed and often disillusioned. If, again, we take into consderation the demographic scene in the country we would note that the flow of new labour-force-entrants of working persons has not shown any sign of appreciable increase. None of these two would augur well for the economic performance of our national planning. In fact, that was what the Janata Government (which came to power after the surprisingly topsy-turvy results in the General Election of 1977) observed when they expressed their feeling of dissatisfaction and disillusion in the following way:

"The assessment of India's economic development over a quarter of a century of planning has indicated some fundamental failures, and it is on account of these that the need has arisen for reappraisal of the development strategy". The foundational targets of socialism,—namely (i) the eradication of poverty (ii) the achievement of full employment and (iii) the creation of a 'more equal' society, would seem to be almost as distant *today*, as they were at the initial stage of our socialistic planning. Failures like these had often led us to such a disquieting situation that people of good integrity could come up with alternative suggestion about the planning strategy and its framework; and we did hear of proposals like 'Restricted' Planning (Bhagawati, 1978), Adoption of the French type of 'INDICATIVE' Planning; in place of existing one (Ezekial, 1980) and Plan-Holiday' for the time-being (Kirolosker, 1982).

In the Sixth Plan which emphasized 'Modernisation', not much progress was made towards socialisation or eradication of poverty. The mid-term appraisal of the Sixth Five-Year Plan also indicated certain shortfalls and lags in the implementation of the related programmes as well as in the realisation of their targets. It suggested alongwith certain follow-up actions towards the removal of doubts in the minds of people about the very efficacy of such plan-frames for the attainment of goals like 'eradication of poverty', 'full employment of the work-force' and 'creation of a 'more equal society'. The newly declared '20-Point-Programme' that is being given top priority for implementation throughout the country is definitely a pointer to that.

Experts' views

Malcolm S. Adiseshiah, one of the leading economists of the country, while discussing a few issues for the next Seventh Five-Year Plan stated *interalia* (Yojana, Jan. 26, 1984) that it would perhaps be better for us to adopt only a single objective (for the Seventh Plan), namely, 'ERADICATION OF POVERTY' and to draw up accordingly a plan-frame for the required development of the agricultural, industrial and infrastructural programmes (including education, health and technology). While advocating acceptance of the 'ONE POINT PROGRAMME', he hinted at the distressing conflict between the OBJECTIVE OF GROWTH and the OBJECTIVE OF SOCIAL JUSTICE, so far pursued in our 'Yojanas' for the last three decades. Prof. Adiseshiah tried to illustrate his point in the following way:

The low 3-5 percent trend of growth rate for the last 30 years of planning, when decomposed, would show on the average a wide range of 2-12 per cent growth rate, a 2 per cent growth rate for the farmers in general, a 3 per cent growth rate for the big farmers, a 4 per cent growth-rate in the industrial field in general and 12 per cent growth-rate for the big companies. But the real antinomy between 'growth' and 'social justice' could be seen more clearly in what had grown (i.e. the products) rather than in who had grown (i.e. the producers) during the period. In agriculture, the production rate of items like 'jawar', maize, bajra, oil seeds, pulses, etc. that would be used mostly by the poor masses declined as against the production rate of items like wheat, rice, sugarcane, etc. In manufacture, the production rate of items like cloth, fertilizer, commercial vehicles & coaches that would be generally used by the poor is rather low in comparison with the production rate of items like petroleum, paper, machine tools, T.V. sets, cars, scooters, etc. that would commonly be used by the rich. In other words, the pattern of development that had thus emerged reflected only the structure of EFFECTIVE DEMAND (usually determined by the distribution of incomes). It would also be seen that an unduly large share of resorces was being absorbed in productions which were related, directly or indirectly, to maintaining (or improving) the living standards of the small number of higher-income-groups.

The same writer in a later article 'Indian Economy in Four Decades' has despairingly observed that in the face of a high growth rate of population (2-2.5%) and a relatively low growth-rate of per-capita income (1-1.5%), Indian economy can only crawl and not grow; even if it tries to run fast at intervals, it would do so only to remain in the same position. Dr Adiseshiah has also made a scathing attack on 'corruption' in the field, the recent manifestation of which is reported by the International Monetary Fund (I.M.F) (Over Rs. 1800 crore per annum are slashed away illegally in secret accounts in one country, Switzerland, by Indian nationals." (Yojana, August Special 1987, pp 13-16)

Dr. D.M. Nanjundappa (Vice-Chancellor, Karnataka University) would like to drive at the 'RURAL-URBAN DISPARITY' that had been found to be increasing over the plan periods and to aver that the said disparity had reached such an alarmingly high dimension that it could provoke 'DISHARMONY' between them. Dr. Nanjundappa would, accordingly, suggest that improvement of the lot of the poor having been the real objective of our planning, we should be bold enough to "impose a moratorium at current levels on urban facilities and spare more resources and energy" for the uplift of the rural economy. The introduction of programmes like N.R.E.P (National Rural Employment Programme) and I.R.D.P. (Integrated Rural Development Programme) might point that way: but perhaps a more intensive effort as well as an extensive measure would be needed to circumvent the crucial issue.

Dr. Bhabatosh Datta, another noted economist, oberves: "The much-needed economic transformation is being ploddingly approached. The much-more-needed social transformation is still unknown to large numbers in rural India. ....Eternal India still dominates over the much advertised New India" (Dr. Bhabatosh Datta—Growth, Development and Progress, a four-decade Review,-Yojana, August Special, 1987, pp 8-11).

We know that Agrarian Reform is considered to be a radical measure; but in a recent study, the distribution of land among the rural hoseholds was found to be of the following type: (The study was sponsored by F.A.O)

The land distribution programme, we may recall, began with the Abolition of Intermediaries (1st Plan),

Table 1

Distribution of land among the Rural Households

No of Households	*Land Possession*	*No of household in Percentage terms*	*Total area of the land owned in% (App)*
7 56 Million	No land at all	9.6%	Nil
27.60 Million	Less than one acre	35.2%	4 0%
19.90 Million	1 acre to 2 hectare	25.4%	16.5%
11.90 Million	2-4 hectare	15.2%	18 5%
8.78 Million	4-10 hectare	11 2%	30.0%
2.66 Million	above 10 hectare	3.4%	31 0%
Total 78 40 Million		100.0%	100.0%

Reform of Tenancy (2nd Plan) and Impostition of Land Ceiling Measures (2nd & 3rd Plans). Had we been able to implement the programmes successfully, we might have raised by now the development level of many a poor family of the rural area.

Why this sorry state ?

A recent world Bank Study has also shown that India is still at the bottom rung of the Development Scale, occupying a position well within the lowest (15 per cent. Why is it so ? Are there any basic fallacies in our plan structure ? Or, are there any gross flaws in the implementation strategies ? Why is there the disturbing gap between plan targets and plan outcomes, inspite of the claim that there has been increase in productions, development of a huge Public Sector, appreciable rise in savings & investiments ? We are sorry to learn that despite the upward move in both agriculture and industry (which are the two main levers of economy), there is an alarming trend in International Trade and Balance of Payment.The annual trade deficit is reported to hover around Rs. 5,500 crore during the Sixth Plan and it is likely to turn worse in the years to come. Moreover there are the recent symptoms of falling productivity, on both agriculture and industry, with the capital-output ratio rising from 3:1 to 7:1 (Yojana, August Special, 1987).

It seems, therefore, that we should not be unmindful to these experiences, while we formulate the objectives, policies, programmes, strategies, etc. of our future plans. We are also to see that non-economic factors like narrow-politics, divisive and disruptive forces and social evils do not stand on the way to our economic progress. We should again be critical about the much-publicised 'Rural Development Programmes (like CDP MNP IRDP, DPAP, NREP RLEGP TRYSEM & the 20-point programme) directed towards eradication of rural poverty. A recent Review Report on all these has exposed quite a few drawbacks of the following type (a) Misuse of funds, (b) Biased selection of beneficiaries, (c) lack of coordinated actions or efforts, etc.

Link education with development

Moreover, if we want to make the rural changes effective we are to link educational programme with these changes. From the 7th Plan onwards again, we are having a New Economic Policy (NEP) as well as a new NPE (National Policy on Education). We expect that these two, the NEP and the NPE, would support each other to remedy the defects that we have so far experienced and to cover up the sad failures of the past have hinted earlier that neither our economic development nor our educational development could raise us, in the past, from the bottom rung of the development scale. Progress in both the fields has benefited only a few, having a large majority outside the orbit.The much-desired social transformation still remains unknown to many. Similar to wastage, corruption, deficit and decadence in the economic sphere, we have drop-out, stagnation, deterioration and retrogression in the educational sphere. Many of us feel that only firm resolve, strong determination, unflinching devotion and constant vigilance can help us trace back from the insidious 'Labyrinth' to the path of real progress. Do the NEP and the NPE hold out any potential promise to that end ?

Apprehensions

A quick glance of both the NEP and the NPE, however, does not encourage us. Rather we feel terribly upset to see that there are often some conflicting views, leading to confusions and contradictions. While the major objectives of our National Development Plans have been kept more or less the same and in tune with our professed socialism, certain measures taken towards that end appear to be gloomy enough to make us apprehensive of the desired outcome. The importance of the Public Sector is being undervalued on the ground of alleged inefficiency and the proportionate ratio in the 7th plan outlay, of the Public Sector as against that of the private sector has been reduced to the extent of 41:59. We may recall that in the earlier plans, the Public Sector was being given prominence over the Private Sector. The Public Sector is now being asked to compete with the Private Sector, with the help of new technology and change in the operational strategy. But what about the objectives of 'Social Welfare and 'Social Justice' of our long-term development plans ? Relative preference to the Private Sector may prove to be dangerous to our socialistic goals. We know that a mixed economy is a mixed ideology and there is likely to be some swinging to and fro, from capitalism to socialism and vice-versa. Moreover when we talk of new technology we must not be oblivious of the possibility that indiscriminate imports may lead our economy in the direction of a large scale integration with the International Capitalist system. The recently introduced liberalised policy in the fiscal sphere, like relaxation of industrial licensing, imports of a wide range of technology and capital goods, computerisation programmes for the proposed high-tech leap forward, is a pointer to that. All these together may usher in an indirect control of foreign capital on Indian economy, thus uprooting the Indian industrial base that has been built over the years. The prevailing global recession may also trap our economy on to a worsening situation of balance of payments.

Contradictions/constraints

It is, therefore, apparent that there is a sort of vague *systematy* of the basic objectives of our long-term plans and Indian economy is becoming a *victim* of conflicts. Further, there are the recent trends of 'overruns' in both time and cost, in almost all our projects, which cause serious threats not only to our economy but also to people's confidence in the integrity of our Government.

Turning our eyes to the education sphere we see that there also are symptoms of similar type of contradictions. Our educational enterprise having been beset with a number of constraints, particularly the financial constraints, we could not proceed in the desired way. The major objectives of universalisation of elementary education. equalisation of educational opportunities, vocationalisation of secondary education, could not be attained. But now in the NPE (1986) there are some

very lofty schemes like Operation Black Board, Navodaya Vidyalaya, Computer training, INSAT programmes, etc. all directed towards the so-called 'Quality education'.

It has been stated that during the 7th plan the main thrust of educational activities will be towards promotion of quality and excellence (India, 1985).

But we don't hear anything tangible about the 'Common School System', universalisation of the provision through school-map projects, parity of courses and occupations, functional improvement of the huge mass of illiterate people, etc. etc. We are thus provoked to question the validity and dependability of both economic policy and the education policy, against the national goals of social transformation i.e. changes in the pattern of our society as per socialistic ideals, self-reliant individuals with cooperative bent of mind, general improvement in the living standards of all our people, *through* eradication of poverty, ignorance and diseases.

Change-over

It is therefore, argued that we would do well to switch over immediately to a new type of pragmatic strategy (based on a firmer principle of redistributive justice) to tackle the crisis of rural poverty, The workforce in the rural areas is growing so fast that we can not but face the situation through a multifaceted plan-frame, involving programmes like (a) Reduction of population growth (b) increase in growth-rate of national income (c) massive implementation of poverty alleviation programmes. James Grant (a former president of the Overseas Development Council) once suggested that the developing countries, like India, should encourage agriculture-based labour intensive programmes rather than industry-based capital-intensive programmes. But, perhaps, most serious is the question of enlisting the needed 'political support' to such a 'change-over' The reason is that it may be terribly difficult for us to persuade the middle and the upper classes, with their powerful lobbies (of medium and large farm interests, industrial magnates, intellectuals and professionals and even the so-called Indian Trade Unions) to turn away from a plan strucutre which assures the growth of assets and incomes of the non-poor class and to adopt instead a reformed structure which may intend to level down the living standard, to the great relief of the huge mass of poor people. Some, like Dr. Adiseshiah, would go to suggest that it being such a highly explosive issue, a pragmatic solution might possibly be found if we could politically allow for decentralisation of planning and plan implementation down to, say, the Block level, with the Block-level development plans to be implemented directly by the local committees (i.e. Block Development Committees), of course with the monetary help and monitory guidance of the State-level Development Committees. The National Development Council will be there to coordinate the work of development planning throughout the country, with supervisory powers and advisory functions, through a system of meaningful dialogue among all the Development Agencies. The necessary changes in the procedural arrangements as well as in the operational methods, when made, may prove to be a pragmatically satisfactory way of planning for development in a vast and variegated country like ours, with its multifarious nuances and differentials. It is also likely that such a change would facilitate encouragement of the 'participatory' concept, with optimum enthusiasm for 'time-bound implementation' of the plans or plan-sectors. Thus the currently observed unfortunate trend of a growing 'gap' between plan-targets and plan achievements might be checked or minimised, because the change would place us in a better position to exercise the principle of 'accountability' in all our activities, related to the implementation of the plan programmes.

Development planning

By way of summarisation, we may now try to indicate the categories of change trends that we may adopt in our approaches to, and system of, development planning in the country.

Firstly, we may have to change the strategy of development and with that, the order of priorities in economic planning. The earlier emphasis on 'MODERNISATION OF INDUSTRY' & the related infrastructure may have to be shifted to 'MODERNISATION OF AGRICULTURE' with its relevant infrastructure and the allied animal husbandry, fishery and small scale industries. The first reason for such a change in a approach and priority is that the agricultural sector of our economy still occupies (and is likely to do so for some years to come) a very important positions in terms of (a) contribution to Gross National Product, (b) occupation of labour force and (c) provision of basic necessities of life to the people. The second reason is that we have come to realise, after about three decades of 'INDUSTRY-BASED' planning, that we should not have so hastily shunted ourselves to the modern industrial sector from our traditional agricultural sector, without the requisite amount of experimentation and feed-back. INSTEAD we would have done well to respect the views of Adam Smith and other classical economists who had repeatedly stated that the growth rate of economy of a country depended, in the ultimate analysis, on the growth rate of its agricultural sector. Of course we are to take recourse to small farm-oriented growth strategy, with land ceiling regulations execduted in their true spirit. We should also endeavour to develop cooperative farming as far as practicable.

Secondly, and as a necessary corollary to our emphasizing the agricultural sector of development, the urban bias in our planning must be replaced by a RURAL SLANT, in order to raise the rural economy to a desirable level. We may recall that our second Five-year Plan sought, atleast in spirit, to rebuild the rural economy (though with a view to laying the foundation of our industrial progress) and to secure, to the greatest extent possible, opportunities for the weaker and the under-privileged sections of our people. In practice, however, the necessary steps and measures to establish such a rural-urban balance were not taken in a

consistent manner. For example, even though some priority was formally given in resource allocation to 'HOUSING' and 'SPREAD OF PRIMARY EDUCATION' they seldom recieved that much attention of the planners that they truly deserved and we had to wait, till the Fifth Five-year Plan to hear of programmes (poverty alleviation programmes) like MNP, IRDP, NREP, RLEGP, TRYSEM etc. Then, again, when we go to analyse the achievements even under these later programmes, we would find that much significant 'gap' was allowed to occur. The planners have never set themselves to a time-bound scheme to provide collective and comprehensive facilities for the rural poor; rather they have adopted a kind of 'RESIDUAL APPROACH' in determining the 'outlays' for the rural areas. Notwithstanding the tall talk of decentralization, industrial centres have continued to get located in the urban areas. It is now being realised that such an urban bias migh be interpreted otherwise and might give rise to rural-urban conflict, with slogans like 'Exploitation can have a black or brown face as easily as a white one, and its modality is chiefly *urban to rural.*'

Any way, as suggested in the World Conference on Agrarian Reform (Rome, 1979), plan priorities have to change and more resources have got to be released (and that again systematically,) for the rural needs, with more 'SOCIAL INPUTS' made available for the development of the rural sector.

Thirdly, there is the demand for closing the growing 'gap' between the 'targets' intended and the 'ACHIEVEMENTS' obtained, through a stricter application of the principle of 'ACCOUNTABILITY' We have rather been painfully led to believe that only a sort of 'DISCIPLINED ORIENTATION' of the nature and structure of the planning process would help us check the prevailing 'EROSION' of effectivenes of our development plans. The unfortunate tendency of EVADING AND AVOIDING RESPONSIBILITY on one plea or the other and DILATORY PRACTICES, should under no circumstances be allowed to go with IMPUNITY. There should rather be greater degree of management efficiency and intensive monitoring.

Fourthly, and lastly, we may come to the question of deciding on the GENERAL CATEGORY of national planning that we should adopt in the near future and continue to follow for atleast a decade or so. We have so far been following the traditional form of centralised planning where task-sharing and decision-making have to a greast extent been institutionalised in the Planning Commission and the National Development Council and only in a small measure in the State Boards of Planning and for that matter in Development Wings of the various Departments of different State Governments. In such a plan frame, the preparatory work for decision-making is mostly done by the so-called 'Technical Experts' and the 'Administrative Bureaucrats' though they are later given the appppval by the 'Formal Committees or Councils, in the name of 'task-sharing on democratic lines. We have however, been suffering from the sad experiences that there being no real scope of task-sharing on the part of the people through their truly representative 'Bodies' (political parties in our country having been dive nature and diffuse in character) all our plans, have STRUCK AGAINST THE ROCKY SOIL, with real conviction behind them. As a result, there only not much popular interest in the develop plans, oftentimes the majority of our people are to be opposed to them and to act against them, b words and in actions.

Accordingly planning and plan impl tation should perhaps be decentralised to the Block level, through the institution of Block Development Committees. In an expansive countr ours, with differentiated local and regional potenti and possibilities, with variegated needs and aspir it is better that we give the people of each Bloc option to decide WHAT TO PRODUCE AND W TO PRODUCE THEM, in the best interest and maximum advantage, of the locality. People a Block level would determine the nature and stru of the local development plans and would take the initiative and responsibility for implementation and administration of plans. The Block-level Development Comm with their direct knowledge of the local feature characteristics and types of people, will definitely a better position to adopt the needed patte strategy, methods and action-programmes. In fac 6th Five-year Plan has explicitly laid stress on involvement of the people in formulating schen development at the local level and securing their s and effective implementation.

This 'snag' has become all the more evident recent appraisals of the Five-year Plans. The e spirit of enthusiasm that we witnessed during the fifties is found to be gradually withering away. It m that our political commitment to these develop plans and their implementation has tended to 'wi result of varying 'pulls' and 'pushes' of doubtful n during the last few years ! Some would feel that u the required quantum of enthusiasm and inter revived and gracefully maintained the future c development plans and their outcome may be much in the dark.

What t

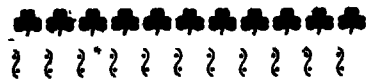
We would, therefore, do well to consider wheth should bring about a radical change in the proce methods of the plan frame and switch over to the method of GRASSROOTS planning on a particip basis, which promises to be forceful enough to h progress more confidently towards our national

Bearing in mind that education is a vital comp of the economic plans, the educational implicati the future economic planning of our country shou understood and acted upon, in the proper perspe In the first instance, 'Education', has got to be s from the desirable sector of 'Social Service' to th sector of 'National Development', and we are g note that the charge of education is being so sh Education has since been regarded as

NVESTMENT" proper, although the planning of lucation has not yet been very appropriately thought it. Education which has so long been nurtured by ilosophy psychology & sociology should now enjoy e benevolent superintendence of economics and anagement, if it is to become an effective instrument socio-economic transformation of the country. ducation as an INVESTMENT would normally iprove of only those schemes of expansion and tension which are likely to raise the learners' oductivity in order to ensure adequate returns to itional upliftment. But political and popular pressure ay insistently demand expansion of educational cilities, no matter whether they would give adequate turn or not. This may give rise to the dilemma of iantitative expansion versus qualitative improvement. e are mistaken when we try to come out of this impasse just changing the 'structure' of the education system, ithout appropriate changes in the 'INPUTS' and the ROCESSES' linking the activities within our institutions ith the developmental activities outside, in the locality in the community around. In order to develop a real id concrete link of education with the general plans of onomic development, in order to ensure imporoved iality and increased efficiency, our teachers along th other related workers may have to labour hard. Of urse, we should keep in mind the warning that AHEU held out at the 1967 International Conference i the World Crisis in Education: Technocratic tyranny tentimes proves to be the antithesis of education oper.

The orientation of our economic policy to labour-tensive agriculture-based programmes of national velopment would indicate that our education system iould directly focus on agriculture and rural development, although efforts should invariably be made to concile the PRODUCTIVE principle with EMOCRATIC and the SOCIALISTIC principles, in der to ensure the desired balance in the development the country as a whole. How to rectify the gross ban-rural inequalities and to meet the basic needs of e poverty-stricken rural majority would thus come out be the central challenges to our future educational olicy.

Moreover, educational planning like education itself iould not be imposed from outside; rather it must be iderstood and accepted by the parties concerned, umely, the students, the teachers, the parents or iardians and the local communities. The involvement the community in our educational enterprise is likely check, through a sort of 'accountability' principle, the owing maladjustment of the education system to the eds and aspirations of the local community or the cal regions. The curriculum-contents, the pedagogical ethods and the student-flow are all to be adapted to e exigencies of the labour-market and to the changing nditions of like in which the learners of today will live morrow.

On the lines we raise the Block-level Development ommittees for economic growth, we may suggest rmation of Local Educational Development Associations (LEDA), that would for all practical purposes be placed in full charge of the educational endeavour of the Block concerned. These LEDA's will be made ready to meet all their educational requirements with the necessary plans for the purpose. However, there will be the District Educational Development Associations (DEDA) in each district to help, advise and guide the LEDA's within the district and to recommend suitable amount of educational grants. It is expected that given this local slant, with decentralised power, the urge for appropriate educational development will come from the base and it will thus encourage the desirable local leadership. Modern trends in planning suggest that all planning should start at the bottom. Can we give our educational planning a start like that? □□

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quite a few functions to perform like planning surveys; analysis of survey data by juxtaposing them with other sectoral and inter-sectoral survey findings; organising planned programmes; monitoring & evaluation of HRD programmes; taking up action research to solve field problems; etc. to cite a few.

There will be several other emerging functions which may be considered by the Apex Body. Even for performing the functions identified, the functionaries need specialised training.

This co-ordinating body will consist of all the existing block level planning and management functionaries. The Block Education Officer will be the Chairman of the HRD Unit of this body. It will include conscientious non-offficials. They will be public figures, social workers and representatives of weaker sections.

The cost for the creation and maintenance of this co-ordinating body has not been worked out. Such an exercise will be futile unless the idea is accepted in principle. There will be no establishment cost with respect to payment of salaries as the existing machinery will be used essentially. According to a tentative estimate, the cost will be higher by twenty percent of the existing administrative cost. This will be a small amount keeping in view the concern and commitment for the realisation of national goals.

Conclusion

It may be said in conclusion that for educational inputs in terms of training in planning and management skills to maximise returns on investment, information has to be imparted in a scientific fashion. This is precisely where education plays a major role in Human Resource Development, especially at the block level. Robust planning for coordination, streamlining of administrative procedures and integration of various development schemes are key to success of HRD at the block level. □□□

Eradication of social evils

Mrs. M.K. Widge

The author here adroitly deals with some rampant maladies responsible for tearing asunder our social fabric. She points out that various legislations enacted to check these evils cannot achieve the desired results unless active mass support coupled with public awarness is enlisted.

OUR SOCIETY AT PRESENTS IS VICTIM of a number of social evils. These have to be viewed in the context of the social and economic development in the country. In a developing country like India, the influence of rapid industrialisation and the subsequent urbanisation, extensive use of mass media of communication, improved transportation and increasing use of technological innovation, both in the field of agriculture and industry, are some of the main factors influencing social change. This change is taking place in the background of traditional social structure existing for a very long period. No one factor, however important, can be held responsible. It is the constant interplay of various social, economic, political and technological factors that effects change in values, attitudes and norms of people.

The traditional social structure arising mainly out of rural economy, provided inbuilt controls for social interaction and relationships. The institution of family which provided best security against social and moral hazards has undergone vital changes. The homogeneity of community life is breaking down and the joint family is giving way to the nuclear family with all the strains and stresses of urban life. This situation, in many cases, tends to promote pathological behaviour and social disorganisation of varying degrees. Over-crowding, slums, unemployment, moral restlessness, vice, crime, juvenile delinquency, high incidence of venereal diseases, prostitution, drug abuse, alcoholism, beggary etc. are some of the problems that the society is faced with at present. Added to these are the problems of discrimination between men and women, child marriage, atrocities on women and scheduled castes, untouchability etc..

Neglect of women

Women form nearly 48 percent of the total population of the country. The position of women has been traditionally that of a 'dependent' The demographic profile which shows sex ratio, life expectancy, literacy rate and economic participation rate suggests the helplessness and insecurity that women in general, especially in the lower strata of society, are exposed to inspite of the Constitutional provisions and various legislations undertaken in their favour. There are inequalities inherent in our traditional social structure which have affected the status of women in differing degrees. Any steps towards their reform are hampered by the allergy of society to change, particularly when there is likelihood of its upsetting the age old values as well as family life. Parents are inclined usually to spend less to educate their daughters than their sons due to (i) the traditional system of descent and inheritance through males and (ii) parental expectation of old age support from male children. The conscious or unconscious neglect of girl babies is quite high in many castes and communities among whom girls are unwanted due to perverse social customs and traditions. Inspite of the Child Marriage Restraint Act, child marriages continue to be solemnised, particularly in rural areas and backward sections of the city population, thereby playing havoc with the physical and mental health of girls. The practice of dowry and problems arising from it are too well-known. Efforts have been made to bring about reform through the Dowry Prohibition Act. Even then there has been an intensification of evil effects of the dowry—more deaths arising from dowry demands. More separations and more cruelties on women are being reported. Similarly the Suppression of Immoral Traffic Act in Women and Girls (SITA) aims at supressing the commercialised vice of prostituation but the practice continues as organised means of living. Industrialisation and urbanisation have aggravated the situation. Girls coming from poor but respectable families, when migrate to urban areas in search of jobs, quite often get exposed to such socially undesirable elements. Innocent women are lured and trapped into this trade by the middlemen/brothel-keepers and subsequently they are not able to retrace their steps. In some cases women are forced into the trade due to circumstances like poverty, unhappy married life, desertions etc. Religious dedication of girls to gods, popularly known as 'Devadasi System' dooming them to prosititution is also surviving in some States. The practice of 'Sati' i.e. buring of wife along

with her husband's corpse, which had been abolished long back, has been again revived. The sacrificed woman is consecrated as a goddess and the funeral spot becomes a shrine. The recent cases of Sati have raised a lot of controversy. Thousands of people in the concerned areas are appreciating this act. There is a belief that to try and stop self-willed 'Sati' invites the horrors of 'Sati Shraap' (curse) under which entire families and villages are destroyed. This is glorification of crimes against women. It is outright cruelty towards them. There is an urgent need to initiate firms steps to prevent this practice and its glorification.

Creating awareness

Concerted efforts, therefore, are required, both on the part of official and non-official organisations, to enable women to acquire self-confidence. Proper education of girls will go a long way to achieve this. It is equally important to bring about an awareness among women regarding the various social legislations enacted for their benefit as also the programmes being implemented to improve their status in society. They should be made conscious about their rights so that they are not exploited in any way. Unfortunately, many of the legislative measures enacted to eradicate social evils affecting women haye remained ineffective due to various reasons with the result that the women, by and large, have not been able to derive the benefits. A woman going to court to seek redress is still considered undesirable and she is subjected to numerous harassments. A vast majority of them being illiterate are not able to seek legal relief on their own and have to depend on others, mainly on the menfolk. Moreover, the legal processes are long-drawn and are also costly. Many of the cases drag on for years. Hence, the long and expensive process of law often acts as a deterrent instead of relief. The mass media like AIR and Doordarshan have paid some attention to mould public opinion against atrocities on women and discrimination against them but there has been a lack of stress on development of women's mental faculties and behaviour so as to develop their individual personalities. Special attention needs to be paid to the rehabilitation of prostitutes. These women are often illiterate and many of them have known no other life since an early age. Over the years they have also been psychologically conditioned to accept this particular way of life. Even if they leave this profession and stand on their own, they are not usually accepted in the society and are often forced back into the trade. Hence there is need to arrange counselling service for such women as well as for the community. Institutional services may have to be provided with emphasis on vocational training, keeping in view the job market, to enable them to become socially useful, economically independent and gain confidence in living a decent life.

Child labour

Children constitute one of the weakest sections of the society. Article 24 of the Constitution lays down that no child below the age of 14 years shall be employed to work in any factory or mine or engaged in any other hazardous employment. The practice of employing children continues unabated because exploitation of child labour is of financial advantage to employer and economic compulsion to the parents of child workers. Child labour has become a great evil. Instead of being in school, children work under adverse conditions that stifle their physical and mental growth and development. ment.

Since it is not feasible to eradicate this social evil at the present stage of economic development, attention has to be focussed on making the working conditions o child labour better and more acceptable. Effort would need to be made to provide proper health care, nutrition and education to such children. The non-formal system of education, as envisaged in the Plan of Action under the National Policy on Education-1986, with organisational flexibility, relevant curriculum and diversity in learning activities to relate them to the learner's needs, may have to be provided and strengthened for such children. Machinery for the enforcement of various Acts also needs to be geared up.

Juvenile delinquency

Crime and delinquency rates show that the problem of juvenile delinquency and vagrancy is on the increase. The juvenile crime is largely a result of neglect by parents/family due to poverty, exploitation of children and faulty environment. There is need to provide a protective umbrella to such vulnerable or endangered ones so as to save them in time from adopting the socially unacceptable behaviour. Children Acts have been in existence in the States/Union Territories to tackle this problem. However, a new Central legislation, namely, Juvenile Justice Act, 1986 has been enacted repealing these Children Acts. It envisages a comprehensive approach towards justice for children in situations of abuse, exploitation and social maladjustment.

The problem of alcoholism and drug abuse has also become a matter of serious concern, especially in the wake of its increasing trend among the youth in various socio-cultural and economic strata. The consumption of alcohol and drugs is harmful not only for the individual but also for the family and the society at large. A few studies conducted to ascertain the prevalence of drug abuse among various sections of the population indicate that the student and non-student youth and industrial workers are particularly prone to this malady. The problem is assuming a serious propensity among students from upper background and income groups, including those in school/college hostels. Most of them take to drugs in an experimental manner which often leads to regular use and later to addiction. Usually a variety of physical, psychological and social factors are associated with drug abuse.

Fighting the malady

In dealing with the problem of drug abuse, it is difficult to identify a single measure which can be both effective and universally applicable. Elimination of

illicit drug supply or manufacturing at the source, suppression of drug trafficking and prevention and reduction of drug abuse are all inter-related. However, since the problem has penetrated almost all the strata of society and is no longer confined to the metropolitan cities, a comprehensive approach involving identification, referral treatment, public awareness, education and rehabilitation aspects is necessary. The health and future of the youth is at stake and addiction to drugs seems to be overtaking the vulnerable sections of the community very fast. It is necessary to make concerted effort to prevent drug addiction from spreading; to treat those already addicted without any delay and to rehabilitate them socially, morally and physically This is a social evil which has to be combated at the individual, family and community levels with the help of governmental and non-governmental agencies.

Until recently, the Governmental efforts were mainly confined to combat the problem through education and publicity. An inter ministerial group was also set up at the central level to periodically review and monitor the drug abuse situation and advise on the measures to be taken through various Ministeries and other organisations. The Narcotic Drugs and Psychotropic Substance Act came into force in the country in 1985. It provides for establisment of centres for identification, treatment, education, after-care rehabilitation and social reintegration of addicts. It also provides for stringent measures against smuggling and trafficking in drugs, both within and across the borders.

However, legal measures alone will not be able to hold in check the increasing use of drugs. People should be made aware of this growing evil. A wide publicity campaign is required, especially through youth welfare organisations at various levels. There should be regular seminars, meetings, conferences etc. on the problem of drug abuse in universities. colleges and schools. To make this programme more effective, more counselling and guidance centres with suitable referral services many be set up in their complexes. It is essentially a human problem which affects the total community. It is only through the total effort of all agencies that we can help control this evil.

Protecting weaker sections

The problem of crime against Scheduled Castes is well known. The members of Scheduled Castes are particularly in a weak and vulnerable position and hence deserve special consideration. Various precautionary and preventive measures are in operation to effectively deal with such crimes. Some of the measures already taken or proposed to be taken to eliminate the phenomenon of crime against Scheduled Castes and also to ensure a sense of confidence and security among them are: provision for the minimum wages for agricultural labourers, effective possession of lands belonging or allotted to them, gearing up of machinery to tackle with disputes of land, wages etc., setting up of Special Scheduled Castes' Cells, Police Stations and Special Courts to ensure quick disposal of registered cases etc. 'Untouchability' is another social dis[illegible] for the Scheduled Castes in the country. The Prot[illegible] of Civil Rights Act, 1955 (PCR) is in existence t[illegible] with this social evil. Under this Act, the Governm[illegible] India provides matching assistance to the States f[illegible] strengthening of machinery for the effective en[illegible] ment of this Act and liberation of scaveng[illegible] converting dry latrines into flush latrines on the [illegible] town approach basis and rehabilitation of unem[illegible] scavengers in alternative occupations. A Comm[illegible] for Scheduled Castes and Scheduled Tribes ha[illegible] set up and a Commissioner for Scheduled Cast[illegible] Scheduled Tribes has been appointed to investig[illegible] matters relating to safeguards provided for Sch[illegible] Castes and Scheduled Tribes. Both submit [illegible] Annual Reports to the President of India.

What t[illegible]

There is a growing realisation that the social e[illegible] existing today are closely associated with tradi[illegible] attitudes, beliefs and ignorance prevailing amo[illegible] people. Hence focussing public attention o[illegible] pressing problems, suggesting means to overc[illegible] them and attempting to change the attitudes [illegible] community should form the main tasks ahead [illegible] social disabilities cannot be wiped out by legis[illegible] alone. A more sustained attempt in implementi[illegible] provisions of these legislations may, with full public co[illegible] tion, produce better results in the eradication of [illegible] social evils. The Central and the State Government[illegible] been making all out efforts to tackle these pro[illegible] However, the success of their efforts depends chi[illegible] the extent of cooperation of the community at la[illegible] fields like these, the voluntary organisations h[illegible] valuable role to play in sensitising the communit[illegible] various social problems and providing a link be[illegible] the public agencies and the community. ☐☐☐

REC supplies power to rural poo[illegible]

More than 18,400 household electric conne[illegible] were released to the rural poor including Harija[illegible] Adivasis by the Rural Electrification Corpo[illegible] (REC) under a centrally sponsored programme "[illegible] Jyoti" to mark the 41st Independence Day this [illegible] The programme was formally inaugurated by the [illegible] Minister for Energy, Shri Vasant Sath, on Augu[illegible] Wardha in Maharashtra, REC was given unde[illegible] programme a target of 5,000 connections by Augu[illegible] 1988 in various States/Union Territories in the co[illegible] The Corporation, which swung into action [illegible] States/UTs simultaneously, exceeded the targ[illegible] about 4 times by releasing over 18,400 conne[illegible] within 9 days. In Kerala, the programme was lau[illegible] by the Union Minister for Information and Broadc[illegible] Shri H.K.L. Bhagat, and in Rajasthan by the Raja[illegible] Chief Minister, Shri Shiv Charan Mathur.

Five lakh single-point household electric conne[illegible] have been programmed to be released under the "[illegible] Joyti" at a cost of Rs. 10 crore through REC [illegible] 1988-89 which the Corporation is confident to ac[illegible]

Dowry, the evil that remains

Uma Joshi

This article deals at length with various anti-dowry laws which in author's views lack the required teeth to fight the social evil of dowry effectively. She laments that this practice enjoys social approval rendering all legislations to deal with if futile. Eradicating this malady, she says, calls for multi-pronged efforts jointly by official and non-official agencies.

ACCORDING TO THE UNION HOME MINISTRY, dowry deaths registered during 1986 and 1987 in the country were 1,319 and 1,418 respectively. Surely, these figures are not correct for as many as 300 cases were reported in 1987 from one single State viz., Andhra Pradesh. Besides, there have been thousands of cases of dowry harassment and torture. Official figures of dowry deaths in the country do tend to be under-estimates as many cases are either hushed up or quietly sorted out without involving the police.

But then, dowry is still a social evil which cannot be fought by mere legislation. In a landmark judgement the Supreme Court held in November, 1987 that the demand for dowry amounted to cruelty entitling a wife to get a decree for dissolution of marriage and that intention is not a necessary element to constitute cruelty in law. So repugnant was the gruesome suicide by three grown-up daughters named Poonam, Kamini and Alka of Gaya Prasad Sahu in Kanpur on February 3,1988 that it must ask every Indian to bow one's head in shame. This just could not have happened in a civilised society where inhuman and undignified social mores are not the order of the day. These girls had to end their lives by hanging because their parents were not in a position to pay for dowry in their marriage. The more sordid story is that this event passed off without any public outcry against the dowry system as just yet another incident which, perhaps, time alone may take care of in rooting it out tooth and nail. That these girls were driven to preferring death to dowry is a comment on the nation's failure to root out the evil.

Deterrent punishment

In fact, dowry death's galore is witnessed day in and day out in this country despite the Dowry Prohibition (Amendment) Act, 1984 which came into force on October 2, 1985 covering all Indian nationals irrespective of their religion, Earlier, on April 28, 1987 in a case of dowry death, the Supreme Court held that it was necessary to punish with death those convicted of murdering brides by burning them for more dowry so that it may be a deterrent to those who commit such anti-social crimes. In all such dowry death cases, the Court laid down that when the accused has been proved guilty, it is the duty of the court to deal with him in the most severe and strict manner and award the maximum penalty. Thus, the Supreme Court rendered a service to women by frowning upon the tenency of trial courts to grant acquittals in dowry cases, disregarding the dying declaration of a woman, and the general hesitation to award death sentence even when the guilt is established.

Again on June 24, 1987 the Union Government announced that if a case has been registered by the police against a Government servant in a dowry death case, he would be placed under suspension. If the Government servant is arrested in connection with the registration of the police case, he shall be placed under suspension irrespective of the period of his detention. If he is not arrested, he shall be placed under suspension immediately on submission of a police report to the magistrate if the prima-facie indicates that the offence has been committed by the Government servant.

Defining dowry

As is well-known, the earlier Act of 1961 had defined dowry as property given directly or indirectly by one party at or before or after the marriage in consideration of marriage. The new law has defined it as anything given in connection with the marriage. Thus, the definition of 'dowry' is now more wide and inclusive of even the presents made at the time of marriage under certain circumstances.

The rules framed under the law require a list of presents, given at the time of marriage, to be maintained by the bride and the bridegroom. It has to be prepared at the time of the marriage or as soon as possible after

the marriage, containing a brief description of each present, its approximate value and the name of the person who has given it. Where the person giving the present is related to the bride or bridegroom, a description of such relationship has to be shown. Where either the bride or the bridegroom is unable to sign, the concerned person will affix the thumb impression in lieu of signature after having the list read out. Presents made without demand will not be considered dowry if they are entered in the list. However, failure to maintain the lists or failure to enter any present in them will result in the giver and the receiver becoming liable to punishment for giving or taking dowry.

Recognised welfare institutions or organisations can now lodge complaints about the dowry offences and courts are bound to take cognizance of such complaints. Punishment for dowry offences has been made more severe. Giving or taking as well as demanding dowry is punishable with imprisonment from a minimum of six months to two years. The fine for giving or taking dowry or demanding dowry has been increased from Rs. 5,500 to Rs. 10,000. In 1961 Act if the dowry was received by any person other than the woman in connection with whose marriage it is given, the dowry was to be transferred to the woman within one year. According to the amended law, this period has been reduced to three months.

Cruelty on brides

Unfortunately, the amended Act does not specify the amount that can be spent on marriages nor does it really regulate the gifts that are given at a marriage. It only clarifies that presents given to the birde at the time of her marriage, without a demand being made, will not be treated as dowry. The new law, however, resticts the gifts given to the bridegroom by the bride and her people in as much as they should be of a customary nature and their value should not be in excess of the financial status of the bride and her people. Customary gifts are supposed to be a wedding ring, a mangalsutra for the bride, some jewellery and a set of clothes or two.

Connected with the evil of dowry system is the cruelty inflicted on a bride after marriage. To solve the latter problem to some extent, the Criminal Law (Amendment) Act, 1983 was passed. Under it, cruelty to a woman by her husband or any of his relatives had been made punishable with imprisonment upto three years as also with fine. Wilful conduct of such an offence by the husband or his relations as is likely to drive the woman to commit suicide or cause grave physical or mental injury to her, and harassment of woman by her husband or by any relative of her husband with a view to coercing her or any of her relations to meet any unlawful demand for property, are punishable as cruelty. These are cognizable offences if information is given to the officer-in-charge of a police station by the victim of the offence or a relative or any public servant authorised by the Government. Also, if any woman commits suicide within seven years of her marriage and it is shown that her husband or any relative of her husband had subjected her to cruelty, the court may presume that such suicide had been abetted by her husband or such relative of her husband.

After the passing of this law, it has been felt that the onus of proof that a woman who died an unnatural death was not murdered for dowry by her husband or in-laws should be shifted to the latter. Then only the story of dowry deaths in the courts would be very different as paucity of evidence in favour of the deceased has always denied justice to the victim's side. The reluctance of neighbours to offer eye-witness corroborations has always come in the way of securing conviction of the accused. And with each acquittal, the evil thrives. A woman is helpless if she is ill-treated, harassed and beaten by her husband and in-laws for not bringing enough dowry. Various other ways of harassing wives and their parents for inadequate dowry or for subsequent demands is a common phenomenon in the country. Something should be done against the subsequent demands from husband's side from time to time. It is common knowledge that if the demands are not acceeded to, the girl and her parents are made to bear the brunt of the in-laws' and the husband's anger in various ways.

Istridhan

A clarification with regard to bride's property was made in a judgement of the Supreme Court on March 19,1985 when the Court declared that items given in dowry to the bride and the other gifts made to her, belong exclusively to her. These do not become the joint property between the bride and her husband or the husand's family. These items, going by the legal name of 'istridhan' consist of gifts made at the time of marriage before the nuptial fire, those made while the bride is being led from the residence of her parents to that of her husband, those made out of love by her father, mother or brother. The husband and his family can at the most have control over these as trustees. But if they use these without her consent or refuse to return these to her when she demands, then the husband and his family can be prosecuted by the wife for criminal breach of trust under the Indian Penal Code. The Supreme Court firmly declared that the Hindu Marriage Act and the Hindu Succession Act had not repealed the concept of 'istridhan'. Section 27 of the Hindu Marriage Act merely provided an alternative remedy of a civil suit and it in on way touched or affected the criminal liability of the husband in case the wife proves that he has dishonestly misappropriated her 'istridhan'.

What is required

The dowry law in its present amended form still needs to be given the much-needed teeth into the Act as it has not yet covered all aspects of continuous harassment by husbands all through their life time. A major change also needs to be brought about in our social value system so that the concept of dowry is given a decent burial for ever. To start with, as an important first step, people should be persuaded into non-display and non-exhibition of dowry items. In this, women's atitude has to undergo a drastic change. Religious

(Contd. on page 34)

Fighting the evils of beggary

A.S. Ansari

Here the author finds no justification for the evil practice of beggary in India which he says is an ugly spot on the face of the country. What disturbs him all the more is that those deserving charity are always deprived of it. A herculean effort with the help of social workers is needed to solve the problem in his opinion.

BEGGARY IS A CURSE. It is an ugly spot on the face of society. Western countries are, practically, free from this evil. But in our land beggars are found everywhere, mostly near places of worship—mosques, temples, gurudwaras, near the mazars and tombs of saints; bathing ghats, railway and bus stations, hospitals, historical buildings, shopping centres and many other places where festivals take place, from time to time. It is difficult to pass anywhere in such places without rubbing shoulders with them.

They spread filth, dirt, disease and surcharge the whole atmosphere with foul smell. They cling to the clothes—pants and saris of well-dressed persons in buses, streets and railway compartments. These people in order to save the fine clothes being spoiled, fish out some coins from their coffers.

Begging has adversely affected our tourist industry. The 'extended palm' eliminates foreigners from coming to our land for spending their holdays and for making picnics. This deprives us of a great deal of toreign exchange.

Various types

Beggars can be categorised, broadly, in three categories:

(1) Old, infirm and diseased who have no one to look after them and they are compelled to beg to earn their livelihood. Society owes a moral duty towards their upkeeping. It has to bear the burden of their food, shelter and treatment.

For such beggars there should be 'Beggars' Homes where they can be brought and allowed to stay and their food, shelter, clothing and medicines be given to them free. Such beggar's homes can be maintained by the Government as well as by philanthropists and charitable persons. In some cities there are such homes but they are not properly managed and the beggars from these houses are found roaming about outside. In such homes not only the diseased should be treated but they should also be taught some sort of skill usable in small scale industries so that they may become useful members of society and no longer remain parasites on it. For the management of such beggars' homes, there should be joint committees of Government nominees and nominees of charitable institutions.

(2) Abandoned children, orphans and widows are also found begging mostly at railway stations, and traffic jams or junctions and religious places. Society should take care of such children and widows and they should be sent to Anath Ashrams (orphanages) and Vidhava Ashrams (shetter for widows where they will be trained in arts and crafts, where they should be given loans to start small shops etc. After sometime they may be able to carry on their business in public.

(3) Third category is of those healthy, robust beggars-such as sadhus and fakirs who claim begging as their ancestors' profession. They are not ashamed of begging. They wear good clothes and are less dirty. They are capable of doing physical labour. Such beggars are not, necessarily, poor. Begging and poverty are not co-existent or coordinated. All beggars are not poor and all the poor are not beggars. Some of the beggars have their families and bank balance. They resort to begging as it is the easiest profession. Some Hindu sadhus have been seen begging sitting on elephants. Begging for such persons has become an organised business.

No justification

There is no justification for giving alms to such beggars. Neither it is a charitable work nor it is a religious or moral duty. The public is to be taught the real meaning of charity. Only destitutes, diseased, small orphan children have some justification for begging but leaving them to roam about at public places is not justified in any way. As suggested above they should be

provided with 'beggars' homes' where those who want to give alms can send it in cash or kind.

Among such beggars there are such rascals whose business is to kidnap the small children, maim and blind them and make them to beg. They thrive on the earnings of such children. Such persons deserve no mercy and should be severely dealt with. They spoil the lives of young children who when given education and training can be of great asset to society. Among such persons there are those whose business is to kidnap small girls and sell them in brothels. Thus, they spoil their whole life. Such persons who are found doing this nefarious trade should be given the severest corporal punishment and should be sent to jail for long terms. Such persons are a great menace to society.

We, Indians, are basically religious and spiritual persons. Every religion teaches us that charity is a great virtue. The result is that alms giving is practised in all religions specially, on Tuesdays and Fridays and all festival occasions, marriages and deaths. The alms takers are mostly strong, sturdy persons who claim themselves to be ancestoral beggars. But there is no religious sanction of giving alms to such persons. The destitutes, the disabled, the diseased who are not able to come to take such alms on account of their disability and infirmity, deserve to take alms. The result is that those who deserve charity and alms remain starved and unclothed, while the sturdy and strong take advantage. It has to be inculcated that giving alms and charities to such sturdy and strong beggars who are able to earn their livelihood, is neither virtuous nor religious work. If we stop giving such persons alms and charities, most of the beggary in India will be wiped out.

It has already been explained that the destitutes, diseased and disabled should be provided beggars' homes where they can live on charity of society.

Root-cause

There are several other reasons for increase in the number of beggars in India. One of them is the problem of young married girls who are abandoned by the parents and in-laws. Such girls are mostly those whose husbands have died young. Such widows are considered Manhoos (inauspicious). The treatment meted out to them is inhuman and many such girls are thrown out from their houses and they have no other means of living except begging. Society is to be taught that such girls are neither inauspicious nor they bring bad luck to the family. They should be treated humanly in the houses of their in-laws and there should be law that if they are not treated well, their in-laws would be held responsible for their behaviour. Such widows can also be given shelter in Vidhwa ashrams which should be run properly with the cooperation of Government and some responsible persons of the society where they should be imparted some sort of industrial skill. Side by side arrangements should also be made for their re-marriage.

Re-marriage is not considered good in society but there is nothing bad in it. It gives happiness to the couple and restores the so called *abhagins* to their rightful place in the society.

Several provincial Governments have made different laws banning beggary in public places. But there is no uniformity in them. The 'labour houses' and the 'poor homes' are not well maintained on account of negligence or connivance of those who are responsible for the supervision. Inmates of such houses roam about begging in the cities and towns in the day time and in the night they come back to their homes.

What to do

Beggary is an all India problem. The Central Government should enact laws for stopping begging in public places in which the cooperation of social workers must be taken. In this way it will be possible to clean the places of worship, historical buildings, railway stations and bus stands and parks from these dirty, filthy beggars on one hand and it will attract more tourists to our land on the other. □□□

Integrate family welfare with development scheme

'Population stabilisation has to emerge as a spontaneous national concern and all agencies should internalise Family Welfare component in their development schemes', said Shri Motilal Vora, Union Minister for Health and Family Welfare at a meeting of Parliamentary Consultative Committee attached to his Ministry in New Delhi on September 5, 1988.

Shri Vora underlined the immediate need for inter-departmental co-ordination to ensure wider acceptability of small family norm. While stressing the importance of education to create greater awareness of the problems of population growth and for motivating the people, the Minister said that literacy, particularly female literacy, was co-related to fertility. Similarly, higher status of women both literacy-wise as well as employment-wise had a significant impact on the fertility trend for it gave the women an equal share in decision making.

The Minister said that the target for the current year had been fixed for various methods of population control in consultation with the State Health Ministers. He expressed the hope that all efforts would be made to achieve them on time.

Shri Vora laid special emphasis on persuading younger age group to accept small family norm by using termporary contraceptives. He said greater stress was being laid on improving the quality of family welfare services. Detailed guidelines have been issued by the Ministry of Health and Family Welfare to States regarding maintenance of minimum standards of technical quality under various family planning methods.

The Members were informed that the 3rd year of the Seventh Plan witnessed an all time high performance since the inception of the programme with total number of acceptors under all methods reaching the figure of 22.5 million comprising 4.88 million sterilisation, 4.30 million IUD insertions, 11.30 million conventional contraceptives users and 2.02 million Oral Pills users.

Rural development: the task ahead

Bepin Behari

This is an article reviewing the six volume series entitled "Rural Development" by Shri Vasant Desai. The reviewer Shri Bihari delves deep into the causes and extent of rural poverty and the adequacy of the steps taken to alleviate it. He is of the opinion that the stupendous task of rural development needs to be related to rampant unemployment and poverty. Analysis of the failure of the past programmes, need for a sound data-based documentation and in-depth scrutiny of past experiences, according to him, need urgent attention and action.

THE NEED FOR POVERTY ALLEVIATION measures is attracting attention. A well documented study of the various related problems on the subject could be very useful at the present juncture of Indian planning and public discussions. Dr Vasant Desai, Director, Visvesvaraya Institute of Socio-Economic Research, Bombay, has done well to present such a compilation

The task of rural development is intimately linked with national growth in general. Presently, in spite of 40 years of planning, the per capita income of the Indian population is miserably low. Compared to US $ 16,690 for United States, 16,370 for Switzerland, 11, 200 for Denmark, 8,460 for the United Kingdom, 1,090 for Mauritus, 530 for Indonesia, 380 for Pakistan and 310 for China, the Indian per capita income amounted in 1985 to only US $ 270 So far, it was expected that the balanced national development could be achieved by the trickle-down effect. But this did not happen. A new approach is under consideration which suggests that the amelioration in the living conditions of the poorer sections of the community would, in aggregate, raise the national level of welfare. By releasing the latent productive capacity of the rural population, the Indian nation as a whole would finally be transformed into a prosperous society.

According to 1981 census of population, 525 million persons accounting for 76.7 per cent of the total Indian population lived in villages. They comprised 90.867 thousand households of 5.8 persons each. Unless each household is provided with adequate means of livelihood, the improvement envisaged would be difficult. But these households are living in difficult conditions. The population pressure in rural areas is very high. Against 36.5 per cent of the urban population being less than 14 years of age and 5.4 per cent above 60 years signifying 58.1 per cent of the urban population to carry the burden of 41.9 per cent additionally, the rural population consists of 40.5 per cent less than 14 years of age and 6.9 per cent more than 60 years old, which indicates that 52.8 per cent of the rural population has to carry the burden of additional 47.4 per cent of population. that is, each rural working hand has the responsibility of supporting an additional member of the community.

Due to their occupational structure, the productivity of rural workers is inherently low. More than four-fifths of Indian workforce lived in villages and 68.8 per cent of them were engaged in agriculture and allied activities Productivity in Indian agriculture is still very low and holdings are much smaller for optimum size of cultivation to get the most satisfactory yield. 66.6 million small and marginal farmers own less than two hectares of land which accounted for 74.5 per cent of the total holdings. These farmers do not get favourable returns from their land. About one-fifth of cultivable land with more than ten hectares of land formed 2.4 per cent of the total number of holdings: 11.5 per cent of top farmers numbering 11.24 million landowners owned 52.5 per cent of cultivable land. Such a distribution of land can only lead to low yield to the bulk of the rural population. The inequality of landholdings leading to inequality of income generation also produces much social and political tension in rural areas. Any study on rural development and Indian poverty cannot afford to ignore the analysis of land reforms in the country. The Government approach to the question of land reforms is as much faulty as much the implementation of the policy decisions so far taken. Whatever reforms have so far been implemented have created more misery than it is expected to solve.

Incidence of unemployment and underemployment in rural areas is very high. Dr Desai has mentioned that the number of persons available and willing to take up additional work in rural India is around 23:55 million.

He has also indicated the rate of unemployment of agricultural labour household in 1977-78 to be as high as 15.8 per cent as againt only 2.7 per cent for the self-employed households with agricultural occupation. The incidence of unemployment is greater among females than among males though the participation rate of females is lower than that of the males. More than 16.5 million unemployed persons lived in rural areas in 1978 which increased to 26.3 million in 1984. Agriculture in India, according to an ILO study, is unable to provide employment to about 60 per cent of the increases in total labour force in this sector.

The basic amenities in rural areas are very poor. Almost three-fourths of births in rural areas are attended only by untrained medical practitioners. More than three-fifths of rural deaths occur from simple diseases like disorders of respiratory system, senility, diseases peculiar to infancy and fever. Only 29.7 per cent of villages are connected with all-weather roads. This percentage is as low as 2.7 per cent in Orissa and 9.3 per cent in Uttar Pradesh. Less than 30 per cent rural houses have brick walls and only four per cent of individual households have built up latrines of their own. As many as 92.4 per cent of rural households do not have any facility of built-up latrines whether individual or sharing. On an average floods take a toll of 1240 humanbeings and 77,000 cattle every year. Drinking water is not available to two-thirds of the rural people within a distance of less than 1.6 km.

Extent of poverty

Quantification of poverty is difficult. It depends upon social norms as well as on physical requirements of the people. Different occupations require varying levels of basic amenities. Some rough norms are however assumed to indicate the general welfare of the population and the percentage of the same falling below the basic minimum. P.V. Sukhatma pointed out the difficulties of arriving at any 'general' conclusion based on 'average' population characteristics. Activity level, body size, and age composition of an individual household would all influence the basic minimum requirements of the household. Any assumption of average nutritional norm is vitiated on account of interpersonal variability of nutritional needs and existence of adaptive mechanism over time. A study group set by the Government of India in 1962 laid stress on an annual income of Rs. 240 per month at 1960-61 prices as the minimum limit of poverty line. Using this price index, P.K. Bardhan worked out Rs. 180/- per month for the rural area to meet the basic requirement on which basis he estimated 54 per cent of the rural population, against 41 per cent in the urban area, living below the poverty line. Since then many estimates have been made. Eric D 'Souza assumed the cut off point of poverty at Rs. 140 per capita per month at 1985-86 prices which provided the minimum calorie requirement of 2,400 per individual in rural areas and concluded that 60 per cent of the rural population is living below the poverty line. Dr Vasant Desai has indicated that the household expenditure worked out for 1977-78 would make 50.8 per cent of the rural population living below the poverty line. Taking into account the rise in consumer price and per capita calorie intake of 2,400 as the minimum requirement in rural areas, Dr V. Desai indicated that all States except Punjab where per capita rural income is less than Rs. 1,300 fall below the poverty line. Ahluwalia has stated that there was no discernible trend in the incidence of poverty in rural India measured as the percentage of rural population in poverty. Improved agricultural peformance measured as an increase in the net domestic product in agriculture per head of rural population was associated with reduced incidence of rural poverty. Exact delineation of the rural population living in poverty is not possible and the subject is probably more academic in nature, yet the colossal nature of rural poverty in spite of four decades of planning is very disquieting.

Phases of rural development

Rural development programme has passed through several phases. The first one began with the inception of the community development programme. It was the first decisive attempt in the direction of comprehensive area planning and rural development. Launched on October 2, 1952 with the primary objective of bringing about an overall development in rural India covering economic resources as well as cultural and economic aspect of the community life, it sought to achieve the fullest development of available human and material resources on an area basis and thereby raise the rural community to higher levels of living with an active participation of the people themselves. The highest priority in the programmes was given to agriculture.

Initially, a community development block covered an area of about 1,300 sq. km with about 300 villages and a population of 0.2 million. The pattern was revised in 1958 when a block was made to cover 620 sq. km only with 110 villages and a population of about 92,000 persons. Supply of fund for the blocks remained primarily the responsibility of the central government till the end of 1966 after which the programme was transferred to the state sector of the plan. This considerably slowed down the prgress of the community development programme and relegated it to low priority projects.

The second five year plan complemented the concept of community development with the introduction of Panchayati Raj. This system of rural administration was introduced in 1959. It was a three-tier structure of local selfgovernment at the village, block and district levels. The States were free to make changes in the structure to suit local conditions. Special representation to these bodies was given to backward classes, women, and cooperative societies. Elected directly by and from the villages, the Panchayats were responsible for agricultural production, rural industries, medical relief, maternity, and child welfare, common grazing facilities, village roads, tanks and wells and for the maintenance of sanitation. This experiment in democratic decentralisation was however not taken in right spirit. The

influential richer sections of the rural areas without political will or the necessary expertise and training controlled the organisation at the different levels. The Asoka Mehta Committee reviewing the performance found that the working of Panchayat Raj administration was vitiated by political factionalism, corruption and inefficiency. Soon the project had to be sidetracked due to unanticipated fall in food production during the sixties and greater emphasis on increase in additional food production attracted greater official attention. The central government focussed its attention on the emergent food crisis and increased agricultral production. in the process, the concept of area development approach of community development got diluted and it became synonymous with agricultural development which constituted the third phase of rural development planning.

The emphasis on agricultural development led to the introduction of highyielding variety of seeds ushering in the green revolution and promotion of new agricultural technology, increased supply of fertilisers, irrigation facility, mechanisation and credit availability. Self-reliance in food production could not be one directional achievement: its fall-out on rural development was not very heartening. The capital intensive method of agricultural operation led to built-in deformities in the socioeconomic structure of rural communities. In the long-term, it resulted in widening the disparity between the rich and the poor specially in the rural areas. Even regional disparity widened because the new agricultural strategy could be directed only to the favourable pockets. To counteract these problems, the fourth plan aimed at diffusing the benefits of modern technology in agriculture to the weaker sections of the community and the underdeveloped regions of the country.

This could be done through programmes intended to tackle special regional or individual problems. Emphasis was given on reduction in poverty and promotion of economic prosperity by way of self-employment. Government of India launched a number of rural development schemes namely, Crash Scheme for Rural Employment, Minimum Needs Programme, Antodaya, Small Farmers. Development Agency, Drought Prone Area Programme, Farmers' Training Programme, Rural Industries Projects, and so on. These programmes helped to accelerate the overall development of the country and their contribution to reduction in rural poverty or to the employment generation was not much. With every increase in farm as well as factory production, the disparity between those who owned the productive assets and those who did not have grew wider. The bottom 50 per cent of households owned only seven per cent of national wealth in 1975-76. The fourth plan even ended with a backlog of 14 million unemployed persons. The number of unemployed by 1977 rose to 23-24 million. These figures represented only those who were registered on the live register of Employment Exchanges which did not completely reflect the true magnitude of unemployment and underemployment in the country

The main weakness of the programme arose due to their being primarily concerned with the development of primary sector. Only those who owned land could benefit from them. The various programmes which were target group oriented or area oriented were not comprehensive whilst the expectations of the people were rising. A large number of rural hoseholds below the poverty line belonged to agricultural labour, rural artisans, non-agricultural wage earners and other self-employed persons in tertiary and service sectors. They were left outside the scope of these programmes. This realisation necessitated the adoption of the new strategy of rural development known as integrated rural development programme (IRDP). It aimed at developing rural areas in a coherant and systematic manner. This fifth phase of rural development began in 1978-79. Integrated rural development programme was introduced in 2,000 community development blocks which were already under one or the other special programmes of SFDA, DPAP etc. Besides, it envisaged that 300 additional blocks would be covered every year under it with a target of covering 3, 500 during the next five years.

The programme of asset endowment under IRDP was designed to develop self-employment ventures in a variety of activites like sericulture, animal husbandry, and land-based activities in the primary sector; weaving, handicrafts etc in the secondary sector and service and business activities in the tertiary sector. To diversify the occupational structure, one-third of the beneficiaries covered under the scheme were expected to be from the secondary and the tertiary sectors. The capital cost of assets was subsidised to the extent of 25 per cent for small farmers, 33 1/3 per cent for marginal farmers, agricultural labour and rural artisans, and 50 per cent for the scheduled tribes. A family could get upto Rs 3,000/- by way of subsidy, the ceiling for drought prone areas was Rs 4,000/-and for tribal beneficiaries Rs 5,000/-. Rs 1766.8 crores were already allocated under the scheme by March 1985; total term credit mobilised was Rs 3,101.61 crores and 16.56 million beneficiaries were covered.

The results of IRDP have not shown as much promise as expected. The diversification of jobs in secondary and tertiary sectors has been less desired. The backward and forward linkages also have been disappointing. The identification of beneficiaries and the charges of corruption vitiated the programme.

The next phase of rural development with which the Prime Minister seems much concerned aims at revitalising district administration as a spring board for local planning. Panchayati Raj is expected to be revamped and people's participation encouraged and motivated. The Eighth Five Year plan is likely to adopt the grassroot planning as an important component of the national plan. Such an exercise would need comprehensive data about district resources and development possibilities. Many private and voluntary organisations have been engaged in local and rural development projects. Dr. Vasant Desai has succeeded

in collecting information on 55 industrial enterprises implementing such schemes at their own initiative and cost. He has compiled information on 28 intensive projects directed towards special area development programmes. These could be very valuable for discerning difficulties and pitfalls in rural development programmes. Only on a careful evaluation of experiences during different phases of rural development, the new approach can be meaningfully adopted.

Programmes and organisations

Some of the specialised major agencies working in the field of rural industrialisation have been Small Industries Development Organisation, Khadi and Village Industries Commission, Coir Board, Development Commissioner Handlooms, Development Commissioner Handicrafts, Central Silk Board, Powerloom Board, National Small Industries Corporation, Small Industries Extension and Training Institute, National Research Development Corporation, National Bank for Agriculture and Rural development (NABARD) and the Council for Advancement for Rural Technology. These specialised agencies were established in order to discharge special responsibilities with regard to various rural and small industries promoted during the different plan periods.

Organisational structures have been created for rural production in agricultural and industrial sectors, increasing employment, arranging for marketing and storage facilities, upgrading rural technology, availability of credit facilities, fostering community service including motivation for public participation in development activities. Where industrialisation was difficult, the Government identified such areas as backward and formulated special programmes to subsidise 15 per cent of capital investment, and 50 per cent of transport cost. The setting up of rural industries projects contributed towards ameliorating regional underdevelopment. The district industries centres aimed at providing the various facilities for small and rural enterpreneurs under one roof. They contributed substantially in removing difficulties and bottlenceks in establishing rural enterprises. Experiences of these institutional devices needed proper evaluation in depth which Dr V. Desai has failed to do.

Dr Vasant Desai has collected information on financing the developmental programmes and the credit facilities provided to various categories of rural farmers and rural artisans. NABARD established in July 1982 with a capital of Rs. 100 crores took over the function of erstwhile Agricultural Refinance and Development Corporation and the refinancing function of the Reserve Bank of India in the sphere of rural credit. It laid stress on development of artisan based industries in rural areas with a view to arresting migration of the rural population to urban areas by generating more non-farm employment opportunities and stimulating greater amount of economic activities in rural areas. The NABARD Act provided for expanding its refinance provision both for working capital as well as investment credit for small scale industries and the artisans in rural areas. By the end of June 1983, NABARD committed Rs. 560.27 million to 24,410 schemes and disbursed Rs. 349.21 million.

The provision of credit facilities was considerably augmented as a result of bank nationalisation in 1969. Between June 1969 and June 1983, commercial banks opened 20,786 branches which raised the number of banks in rural areas to 22,618 constituting 53.8 per cent of the number of branches in the country. The total number of bank offices which stood at 8,262 in June 1969 prior to bank nationalisation increased to 44,125 in December 1983 and there has been phenomenal changes in the proportion of bank offices in rural areas in as much as their share increased from 22.6 per cent numbering 1832 bank officers to 55.3 per cent numbering 24,396 offices during the period. With a view to ensuring that rural branches of banks extended adequate assistance for productive activities of small borrowers including rural industries; banks were asked by the Reserve Bank of India in June 1980 to endeavour to achieve a credit-deposit ratio of 60 per cent in respect of rural branches. The relative ration of all scheduled commerical banks as at the end of June 1983 worked out to 59.9 per cent as against 53.8 per cent at the end of June 1980. The public sector commercial banks provided credit facilities to handlooms, handicrafts as well as small industrial units under the 20-Point Economic Programme to the extent of Rs 150.9 crores by the end of December 1983.

At the end of June 1981, the aggregate level of outstanding credit of all institutional agencies which offered direct finance to the agricultural sector was estimated at Rs. 7,560 crores, of which the share of cooperatives and commercial banks amounted to Rs. 4,214 crores or 55.7 per cent and Rs. 3,063 crores or 40.5 per cent respectively. The indirect advances outstanding were estimated at Rs. 2,554 crores.

The World Bank, besides several other international institutions have also been assisting rural development. Upto June 1984, the World Bank provided US $ 5746.2 million for agriculture and rural development of which IBRD provided US $ 568.2 million and IDA US $ 178 million.

Dr Desai has taken note of the establishment of the council for advancement of rural technology (CART) as an apex organisation for mobilising technology for rural areas, but much more efforts have been directed in this direction. The several CSIR laboratories and the NRDC have contributed towards the techological solution of various rural technological problems. The laboratories of KVIC has also contributed towards upgrading rural technology. The contribution of small industries service institutes as well as of many voluntary organisations deserve credit in this context. The Ministry of Industrial Development has also a special appropriate technology unit working in this field. The crux of the problem in this regard is identification of special technological problems in rural areas, assigning priorities to their solution and assisting in the adoption of improved technologies at appropriate levels. This is the problem of rural development of which proper

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The trickle-down hypothesis; (A case study)

(Srabani Guha)

The author here attempts to review some of the development and social welfare activities taken up in the Visakhapatnam District of Andhra Pradesh. She feels that fruits of development must reach quickly the population at the base. If the 'trickle-down' theory cannot stand the test then the Government has to find some other way to distribute the benefits of development. Moreover, a balance should be maintained between the productive and non-productive expenditure so that the financing of development scheme does not become difficult besides causing a drain on the state exchequer.

VISAKHAPATNAM IS ONE OF THE north-eastern costal districts of Andhra Pradesh with two district geographic divisions, the plains division and the hilly Agency division. Population of the district is 25.76 lakhs as per 1981 census while the geographical area is 11,161 sq. kms. Scheduled Castes and Scheduled Tribes constitute 7.85% and 13.74% of the district population respectively.

The district is chiefly agricultural with a variety of crops, from foodgrains to cashcrops, like groundnut and sugarcane. It is also rich in livestock population. Its mineral wealth is sizeable with deposits of bauxite clays, graphite, limestone and mica. The long coast-line offers possibilities of developing marine salt and salt-based industries. It has a fine harbour which is of growing strategic and commercial importance. With the available infrastructure Visakhapatnam offers bright prospect for industrial development.

The programmes undertaken in the district sponsored by the centre/state are basically aimed at providing gainful employment and reduction in the incidence of poverty IRDP is one such scheme funded by the Centre and the State on a 50:50 basis. The Objective is to assist the families below the proverty line in rural areas by providing income generating assets. The target group includes small and marginal farmers, agricultural labourers, rural artisans and others, whose annual family income is below the cut-off line of Rs. 3500 per annum. The government has approved a physical target of 13580 beneficiaries with a financial outlay of Rs. 745 lakhs for the year 1987-88. PASMA aims at helping small and marginal farmers to increase agricultural production by providing necessary inputs and improving water management. The programme includes minor irrigation works and land development schemes. The government has approved a physical target of 15,261 beneficiaries with a financial outlay of Rs. 212 lakh under PASMA during 1987-88. Under minor irrigation schems, several community bore-wells and check dams were constructed in addition to energization of the existing wells. TRYSEM is facilitating component of IRDP started in 1979 to provide technical skills to the rural youth from families below the poverty line for taking up self-employment activities. The activities include masonary, silk-reeling, carpentry, tailoring, carpet weaving, dress making etc.

Land use

With a view to helping the tribal families. for their economic upliftment, massive efforts are being made to make optimum utilization of land and water available in the agency area by undertaking a variety of economic assistance schemes like, soil conservation, banana cultivation, vegetable growing, seri-culture and installation of lift-irrigation scheme. With a view to improve the basic infrastructural facilities in the Agency area the government has sanctioned a number of works like drinking water facilities, setting up of Ashram schools, hostels, technical & vocational training institutes, housing colonies and construction of roads, checkdams and minor irrigation schemes. Besides the government is actively campaigning to discourage podu cultivation and promote terrace cultivation. Social forestry has been taken up under RLEGP and NREP programmes either in the form of (1) growing nurseries/plantations by the farmers owning some land or (ii) saplings being given to the selected beneficiaries who are expected to

urture them at the payment of some watering charges.

Social welfare activities

Social welfare activities undertaken by the govern-ient are oriented towards providing education and conomic benefits to the scheduled castes. Setting up of ostels, orphanages, residential schools, hostels for hildren of leprosy patients/those engaged in unclean peration, are some of the activities taken up on a iassive scale. This coupled with the provision of pre nd postmatric scholarships, stipend to ITI students, ree distribution of note books, sponsoring of SC andidates for competitive examinations have expanded he existing education facilities substantially.

!conomic support schemes include poultry farming, ninor irrigation warks, seri-culture, garment producing nits catering to the demand of government hostels, ocial forestry in the rural areas and setting up of type raining centres, printing press, small kirana shop, car ervicing centre, installation of xerox machine etc. in he urban and semi-urban areas.

Scheduled Caste Co-operative Society Ltd. has been ssigned the task of implementing schemes outside RDP in selected clusters of villages. The society has onstructed several dairy and shopping complexes, oultry farms, factory, and leaf plate making centre, etc.

Education

Activities of Backward classes Corporation include stablishment of ashram schools, and hostels to cater o the needs of pre-matric students, provision of cholarships and re-imbursing of tuition fee paid by the].C. students. Basically the activities of B.C. Corporation ias been reoriented to be in tune with the anti-poverty rogrammes of the government. It provides margin noney loans to the back-ward classes to the extent of 0% of the total outlay of a scheme subject to the naximum of Rs. 5000 at the interest rate of 6.5% per nnum. Balance of the amount required for the scheme s mobilized by DRDA subsidy & bank loan.

There is a social security scheme that provides for ension to the old, landless labourers & widows and overs personal accident insurance scheme.

Evaluation

As far as income and employment generating ictivities are concerned the efforts made are commendable. But it should be borne in mind that any edistributive programme is unlikely to work in isolation rom the pattern of growth that the state is able to enerate. This is true for all the poverty alleviation rogrammes.

The following observations have been made in espect of one of the several economic activites taken ip. Typical problems faced by the poultry units are (i) he cost of feed has increased several times while price f egg has not, and (ii) most of the units have 500 birds vhereas any viable unit should ideally have 2000 or nore birds.

Most of the schemes are not economically viable and are financed by huge government subsidy. For example. for any poultry farm managed by a S.C. beneficiary, the shade is constructed by S.C. Corporation, house site pattas are given by the Housing Corporation, and working capital provided under IRDP schemes. One way out is to make the units bigger and also make efforts to set up co-operatives that will reduce the overhead expenditure. This is important since sooner or later the question will arise how long can the government pump in money for these economically unviable projects.

The pressing need still is for more investment in both material and human capital formation. In this context, it may be mentioned that the state government is giving a lot of stress on expanding existing educational facilities by setting up a number of schools & hostels for the general as well as SC & BC students. But the facilities provided in the hostel are inadequate in general. While the emphasis is more on greater coverage, the quality is allowed to suffer. It is felt that emphasis should be on (i) setting up of more residential schools instead of hostels (particularly applicable to girls' hostels which are generally difficult to administer) (ii) providing scholarhip to SC/BC candidates and letting them stay where they belong instead of keeping them segregated in a particular hostel exclusively meant for them and thereby pushing them away from the mainstream.

Coverage of social security schemes is inevitably poor due to paucity of funds.

Housing

With a view to providing shelter to the houseless poor the state government has undertaken a massive programme of constructing low cost housing colonies for the weaker section which are provided with infrastructural facilities like drinking water supply, interval & approach roads along with economic support schemes based near the housing colonies, For the year 1987-88, Rs.35 lakhs has been released; so far an amount of Rs. 27.18 lakh has been spent benefitting 16,899 weaker section families of the district.

Getting the houses constructed by the beneficiaries themselves is the novelty of the scheme which explains the success of the same.

Economic support schemes include poultry farming, minor irrigation works, raising of plantation etc. Special mention should be made of 'Artisans Complex' at Etikopaka. It is felt, that the provision of housing colonies and credit to the arisans should be supplemented by proper marketing arrangements that will enable the artisans to get their due share of profit.

New programme

The state government has launched another programme by the name 'Telugu Grameena Kranti Patham' in January '88, financed 50% by the government and the rest by the beneficiaries in terms of labour

ıs well as money. An amount of Rs. 317.7 lakh was eleased by the government in Visakhapatnam district, or taking up such schemes. Works taken up are (i) pening new milk collection centres run by co-operatives ii) construction of community irrigation wells, roads, uildings etc. The most popular scheme is the onstruction of community irrigation wells and nstallation of pump-sets. Visakhapatnam district is an griculturally backward district having vast areas of lryland without assured irrigation. So exploitation of nderground is the only alternative to supplement the imited available surface irrigation in the district. This as increased coverage of irrigation, enabling the small marginal farmers to save their crops during drought n one hand and has brightened the prospect of raising wo crops a year in the rainshadow areas on the other and. TGKP is a novel scheme in the sense that people lo share the responsibility along with the government nd also have a stake in the projects undertaken ecause of personal contribution in terms of labour nd money. But it is to be noted that for certain schemes uch as community irrigation wells, only the middle lass or more precisely the better off farmers are able to ake advantage of the scheme because of higher onetary contribution necessary in such schemes. lowever it lightens the government's burden and nsures better management of the assets thus created.

The state government's rice scheme ensures supply f rice at Rs. 2 per kg only to the poorest of the poor (a reen card holder) whose family income is Rs. 6000 and elow per annum. The scheme has a wide coverage and operating more or less efficiently However, there are wo problems that demand some attention. Firsty one as to take care of the quality aspect. The fine variety onstitutes 80-85% of total production of the state. This currently being procured by the government for the cheme, which otherwise could have fetched a higher rice. Secondly one has to consider the financial nplications of the scheme. Since the open market price as risen, the current withdrawing under this scheme is ore which in turn means, more of state funds going nto the financing of the project. The implication of this erms of managing the government finance has to be orked out.

What is needed

While our basic objective is development, it is ecessary at the same time to ensure that fruits f development should reach the population at the base. n case the 'Trickle down' theory fails-as is precisely the ase with us the government has to find some other way o distribute the benefits of development. Two rupees er kg. rice scheme is one such way. But it is to be noted hat some sort of balance has to be maintained between he productive and the so called non-productive xpenditure so that financing of such schemes do not ecome difficult and at the same time it does not halt he development activity by proving to be a drain on the tate exchequer. □□□

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appreciation is still lacking.

The efficacy of rural development programmes must be reflected in increased employment opportunities and increased level of per capita income. In order to expand employment opportunities in rural areas, employment guarantee schemes, training of rural youth for self employment (TRYSEM) and various other schemes were launched. TRYSEM started on 15th August 1979 and within a year it covered all the 5011 development blocks. The objective of the scheme was to cover about 600 families in each block in a year, and to train 2 lakh rural youth upto the age of 35 years and below the poverty line to train them for a period of six month with a view to enabling them to set up their own trade. During the period of training each trainee received Rs. 100/- per month as stipend. Besides, the training centres received Rs. 50 per month per trainee towards training expenditure.

TRYSEM programme was supplemented by national rural employment programme (NREP) which was launched in October 1980. It was expected to generate additional gainful employment in rural areas to the extent of 300-400 million mandays per annum. An outlay of Rs. 1,620 crores was provided under the sixth Five Year Plan. Under this programmes, the subsidised foodgrains were distributed as a part of wages. Between 1980 and 1985, 1,774.37 million mandays employment was generated and 2.07 million tonnes of foodgrains utilised.

As a result of the various programmes under implementation, the number of poor persons in absolute terms is expected to fall, if the seventh plan achieved its targets, to 211 million in 1989-90, but it would imply that 26 per cent or a little over one-fourth of the total population would still remain below the poverty line. At that period, 327 million persons would constitute the labour force but employment opportunities could be created only for 227 million manyears. This shows that a stupendous task still remains to be performed. The problem of rural development in order to accomplish it successfully requires to be related to rampant unemployment and poverty in Indian villages. The future performance in this regard would require a very careful analysis of the failure of past programmes and specialised agencies. Any study on rural development must also take into account the consumption requirements in rural areas. To grapple with the task ahead in rural development, one would need a sound data-based documentation and much in-depth scrutiny of past experiences than what Dr Vasant Desai has tried to achieve. Dr Desai's effort however needs encouragement as it seems to be his maiden effort in producing such a voluminous treatise. □□□

BOOK REVIEW

Industrial economy

ic Policies and the Industrial Economy of a since Independence, by K.Deb; published by ling Publishers (P) Ltd. L-10, Green Park nsion, New Delhi-110016; Page 358, Price 175.

e book under review is divided into 14 chapters examining different aspects of industrialization ts made in India. Author has often argued his view with the support of relevant data.

the beginning he analyses India's industrial rmance prior to Independence.

garding industrial progress after independence uthor is of the view that, although apparantly the ess in industrialization was substantial, there were dark spots and, from the angle of our requirements inadequate. The pattern of industrialization was socialistic in nature; instead of benefiting the rity, it looked after the requirements of only a small on of population at the top. The unorganised sector dustry, which catered mainly to the needs of rural recorded a very poor growth. The development ery much regionally unbalanced and also there was y concentration of wealth in few hands. Lack of consciousness and wastage of resources were too ng. The goal of self-reliance was also paid only a lip-ce. Regarding industrial policy of the government, uthor is of the view that IPR 1956, which provided asic framework for industrial policy over the whole d, was, on the whole, on the right direction. The y statements made at different times were also rally unassailable. The problem was mainly in the of implementation. About the role of commercial s in providing industrial finace, the author describes rowth of commercial banks as quite fast. Between and 1985, the number of scheduled commercial s increased 18-fold; their deposits 79-fold and ts 71-fold. A large portion of the increase, ver, took place only during the last fifteen years. of the important steps taken for bringing the ed growth in banking included enactment of ing Regulation Act, introduction of deposit ance, establishment of Refinance Corporation of stry, nationalization of the major segments of nercial Banks, greater attention to priority rs and effective use of credits.

e role of Financial Institutions was particularly rtant in recent years in the provision of industrial ce. The small enterprise, however, remained y neglected from the purview of financial institutions' tion. The SFC's were the only organization meant to serve small enterprises. The financial Institutions' attention to development of backward areas was also negligible until recent years.

Commenting upon the government pricing policies he says that the need for effective control over prices were always recognised by the government.

Government took a variety of measures from time to time-fiscal, monetary, price control, physical control, etc. But the results obtained remained far from satisfactory. For the inflationary price rises, inefficiency of the governmental machinery was mainly to be blamed.

Regarding performance of Public Enterprises in the country author argues that the growth of public enterprises was quite fast. The objectives laid down for them, however, remained largely unfulfilled. The investment continued to be concentrated in a few states. The development of the ancillary sector was not given any attention until recent years. Huge wastage of resources was done nakedly. Apart from delays in commissioning of plants, the utilization of installed capacity remained incredibly low in many areas. The reasons behind this situation were numerous and often complex. Poor planning and coordination, poor quality and inadequate supply of materials, lack of proper maintenance facilities, defective equipments, poor man-power management, etc. bedeviled most of the enterprises.

On the whole the author in this book has vehemently criticised the pattern and process of industrialization taking place in India. He has blamed categorically the political leadership in power for the unsatisfactory state of industrial performance in the country. According to him, leadership lacked the requisite will, motivation and commitment required to bring about a socialistic, truely self-reliant and strong economy.

He also has attacked severly the bureaucratic machinery at work for the non-implementation of policies and non-performance of the industrial economy.

Tushar Kant Mishra

Multinationals

MULTINATIONAL CORPORATIONS By. V.M. Desai; Pages: 135 Price: 50; Published by: School of Management Studies; 203-D.N. Road, Fine Mansion Fort, Bombay 400 001.

President Ronald Reagan, in his State of the Union address in January. 1983, said 'one out of every five jobs in the United States depends upon exports'. No

nation, these days, stands alone; trade with people and businesses in other countries is an inevitable global feature. In the past quarter century, especially after the Second World War, the volume of goods traded between nations had increased phenomenally. Economic isolationalism has no place in the world business today and the prosperity of each nation, developed as well as developing, depends upon the well-being of others. Companies, large and small, make and sell products around the world. The world has already become a 'global village' of interdependent people. Of the 200 largest American companies, eighty have more than one-fourth of their sales, earnings, and assets abroad. Of Europe's 200 largest compaines. approximately eighty also conduct more than one-fourth of their business abroad. During the past decade, transatlantic capital investments have increased about 10 per cent per year in each direction. A knowledge of international consideration, therefore, is becoming highly important for the proper understanding of the strategic management process in large corporations throughout the world. Just as Indian firms are becoming more involved with operations and markets in other countries, imports and subsidiaries from other countries are becoming a part of Indian landscape. Now-a-days people in all countries are finding themselves becoming increasingly affected by huge multinational corporations.

The book under review deals with the origin and development of multinational corporations in a comprehensive fashion, keeping the unique requirements of students and teachers in this relatively unexplored area. The growth of multinationals and their importance in the present day world are outlined in the first chapter, well-supported by statistical information. Joint ventures and collaborations, the nature and extent of foreign direct investment in India are discussed in the next two chapters. The legislative provisions affecting multinational operations in India are catalogued in the next chapter. In the final chapter, the author has discussed about the transfer of technology from parent company to the host country, the R&D activities of transnational corporations, and other relevant topics such as transfer pricing, free trade zones, code of conduct, etc.

The book is primarily meant for students pursuing elementary courses in Businesss Policy and Strategic Management and as such the language is text-bookish. Although the author has tried to provide latest data regarding multinationals, the presence of a number of tables having outdated information, especially on foreign direct investment in India, foreign earnings of multinationals, the pattern of investment in developed and developing countries etc, limits its usefulness to both students and teachers interested in exploring the field in an elaborate manner. For a book of this size, the price seems to be quite high and prohibitive from the students' point of view. In view of the paucity of literature on this subject, the book should receive attention from those interested in understanding the intricacies of international business environment.

V. Surya Prakasa Rao

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leaders can play an important role by making the womenfolk take solemn vows against display. In fact, there should be a public outcry against vulgar display of wealth in any form. In colleges and universities, the battle against this social evil should be fought tooth and nail by young students. Seminars, symposia, debates, essay competitions, etc., should become regular features in our educational institutions to denounce the system lock, stock and barrel. Also, the dowry takers and givers should not be equated because the latter are generally victims of compulsive circumstances, rather than parties to the criminal act.

The law, as a remedy for what is basically a social evil, has its own limitations, as the despicable practice enjoys social acceptance. Indeed, it is even glorified as a status symbol. In many cases, women themselves are the prime movers for giving or taking dowry, leading to its perpetuation and spread. Fighting the mercenary spirit, greed and desire for vulgar display of wealth-the traits that fuel the obnoxious custom-calls for a multipronged efforts jointly by official and non-official agencies. No less important is to impress upon women the need to resist all pressures aimed at turning them into chattel.

What is really needed is a programme of mass education which would increase awareness, particularly among the youths, that demanding dowry is a barbaric custom which could ultimately result in bestiality of the worst kind: A simultaneous campaign is needed to give greater rights to women and to make them better aware of their rights. Indeed, even a child needs to be convinced that the dowry system is an evil so that when he grows up, he rejects dowry at the time of marriage. It is not necessary that with the spread of education, the dowry system will automatically disappear. As such, our women's groups should put up relentless pressure on the administration to see that the law is enforced in its true spirit. There is also the need for an organisation along the lines of civil liberties groups to monitor and expose the women's rights and protest their infringements. Without such watchdog groups, the problem will remain largely unredressed. So long as the system has social and cultural approval, no law against it can succeed. The menacing proportions that the diabolical dehumanising dowry evil has assumed must attract and receive our first priority for the creation of an enduring social value system in the society. ☐☐☐

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This brain-drain must stop

Alex Abraham

The author here goes into the causes of the brain-drain menace faced by the world in general and India in particular. According to him the exodus of skilled workers/specialists from the developing countries causes heavy monetary losses on account of huge expenditure on their education/training. To overcome the problem, the author suggests, enactment of a suitable law and formation of a statutory committee comprising top executives of the education and labour ministries to control the brain drain.

TODAY SCIENCE, TECHNOLOGY AND engineering play a dominant role in the progress and prosperity of a country. More progress in science leads to improved technology which in turn lead to more production. This calls for more investment in Science. The demand for skilled personnel throughout the world caused by the scientific and technology revolution has brought changes in the migration of manpower. The present trend of migration indicates a net outflow of skilled personnel from less developed countries to developed ones. This phenomenon is defined by the negative term 'Brain Drain'. W.R. Bohning in his study of Mediterranean migrant worker describes him as one who decides to go inot a 'New World' in order to return as a changed person.

People who migrate from one nation to another fall into three groups namely (i) Professionals and skilled worker, including doctors, engineers, teachers, scientist, accountant and technicians (ii) Semiskilled workers and (iii) unskilled workers. Bohning has classified migrant workers as follows: Trainees who at relatively advanced level of their vocational development go abroad or are sent abroad by their firm or by the government in order to familiarise themselves with modern production or management methods. The period of the trainee's stay ranges from three days to three years. Their return is planned. Seasonal Migrant' are those who migrate abroad to take up seasonal employment. Such migrants show a little inclination to seek more permanent employment. They may continue to take seasonal work year after year without planning to stay in the host country. 'Poly-annual migrants intend to work abroad for more than a season but not for more than a medium term span of 10 years, they are basically return oriented. There are few among them who stay permanently. Some of them return after a few months because of their failure to cope up with the new culture or environment or for health reasons. '*Life Cycle Migrants*' are those who intend to leave their own country for the entire working life.

Causes

Georges Minet who studied the immigrants and industrial relations in Western Europe analyses causes of migration as follows:-

(a) Workers migrate essentially for financial reasons.

(b) They produce in the host country the type of social relation to which they are accustomed in their own country.

(c) They sometimes have the impression of being restricted to the role of spectators without any real say in union affairs.

International emigration scenario

Brain exodus from Europe to the United States increased six fold during 1957 to 1967. The British Minister of Health remarked that Britain could not afford to train doctors just to strengthen the American Medical Society. From 1947 to 1964 about 85,000 foreign scientists, doctors and Engineers settled in the United States. A sizable number of migrants came from developing countries. Britain is second to the United States in receiving qualified personnel from the Third World. While sending an average of 3,000 experts abroad per year she uses the services of 5,000 foreign specialists mainly medical personnel from the less developed countries to British Common Wealth. Large number of learned Middle Class Indian students aspire to go to U.S.A. rather than to any other country. The number of students of Indian origin is about 14,000. There is a dramatic increase in the number of aspirant students sitting for different tests such as a Test of English as Foreign Language (TOEFL) and Graduate Record Examination (GRE) which are pre-admission requirements for most American Universities. A quarter and a half of all graduates from the better Indian Technology Universities such as the Indian Institute of Technology (IIT) seek to study and then settle down in the U.S.A. This is also true about doctors, scientists and managers (MBA's). The rate of import of Indians in the development of research and technology in U.S.A. is very high. About [illegible] Indian scientists,

[illegible]

Exodus from India

[illegible] studies carried out by UNESCO reports reveal that among Indian specialists working abroad [illegible] per cent are [illegible] persons [illegible]. According to the latest available migration statistics, India lost by way of emigration as many as 13,200 managers to developed countries between 1974 and 1981 alone. Between 1947 and 1965, 6,000 Indians sought USA citizenship. During the period 1965 to 1976 their number has risen to a lakh and between 1976 to 1980 by another 50,000. Studies further indicate that the emigration of top and intermediate personnel from India in eight years that is from 1958 to 1966 has increased four fold. This increasing flow has now established a half million Indian community in USA. India serves as a major source of migrating professional labour force. Majority of migrants are from Kerala, Panjab and Gujarat. While looking at Kerala the density of population is considered to be the highest. There is an increase in the number of educated unemployed. According to 'Technical Manpower Bulletin April 1973, May 1973' the incidence of unemployment among scientific and technological personnel is highest in Kerala. The State has exported highest persons to the rest of India both from its rural and urban areas. High literacy and low per capita income of the State are two factors responsible for the large scale inter-state and international migrations. Two lakh Keralites live in USA and Canada. USA and Canada attract educated personnel. Poor and less educated move to the gulf countries.

The Bombay Chamber of Commerce and Industry conducted a survey through a purposive selection of 402 migrant house-hold having 514 persons working abroad. Muslim and Christian communities from poor homes were major emigrants. Other migrants were drawn from the pool of the educated unemployed. About 16 per cent of the emigrants were either graduates or post graduates or technically qualified persons. Lack of gainful employment opportunities at home and lure of high income caused many of these people to leave their homes. Sources reveal that nearly 60 per cent of the emigrants were below 30 years of age. Out of the total emigrants 97 per cent had gone to the gulf. Over 62 per cent of the emigrants were employed prior to taking up overseas jobs. Skilled workers like welders, mechanics and persons working in factories constituted 10 per cent of the total emigrants. Real brain drain occurs of engineers, medicos, paramedicos from the central Travancore area. Nurses from Kerala State are employed in U.S.A. and West Germany. Majority of them send monthly remittances. The foreign currency of Non-resident accounts scheme was introduced in November 1975 by the Government of India to attract savings of emigrants. The total number of accounts opened upto December 1976 under the Scheme was 11,984.

Social acceptability

The immigrant workers maintain a low profile at a [illegible] [illegible] speak or read or write the local language. They [illegible] reluctant to get themselves mixed up with the host society. They continue to practise their native customs and habits and are criticised for being communal. Their social interaction is generally restricted to their own people from their own countries. No credit is given to them for menial job they perform. Semi-literate and unskilled workers cling on to their own cultural identities and prevent them from adjusting their customs, habits, attitudes and beliefs to the need of local environment. This is one of the reasons for their maintaining a low profile at work place. The way immigrants conduct a strike, draw up their demands, elect their representative and deal with union run counter to the customs of host country.

Effect

For the developing countries outflow of national personnel to the West has only negative effect causing economic, social and psychological losses. Outflow of specialists of developing countries entails a total loss of money invested in their education, training, improvement of skill etc. To these direct losses and indirect consequences should be added such as slow down in modern production and in the growth and reconstruction of productive force, the weakening of administration of productive force, the weakening of administration of socio-economic development, the lowering of the potential of executive personnel and slow-down on the process of overcoming backwardness. The brain drain from developing countries tends to bring down modernisation of the social structure. Declining level of moral values results in corruption and acquisitive attitude to life. The brain drain is latent with unfavourable political consequences because it may undermine national unity and the struggle for economic independence. Prof. Archna Sharma, President of Indian Science Congress has alerted the Government of India to a new kind of brain drain which will be harmful to scientific research. This new type of drain is taking place in India which affects the quality of science teaching in general and training of research workers in particular.

Countering the problem

Developing countries like India should invest more on education, training and research. A few seats should be allocated for the research activities in university laboratories. There should be liberal allocation of foreign exchange for investigation and surveys in the research institutes also. Academic freedom should be given to younger scientists and technicians for the selection of research problems. To control brain drain attempts, public administrators are expected to take the following steps.

(a) To offer attractive pay Scale to skilled workers and offer them material incentive, so that technicians will be less inclined to go abroad. (b) To prepare national plan on how to avail the services of trained skilled and semi-skilled personnels. (c) To introduce emigration [illegible]

(Contd. on page 21)

Women and higher education

Dr. Narayan Prasad Sharma

Though the Constitution and the Indian society have given a respectable position to women, various factors have stood in the way of their advancement in the field of higher education. These factors/obstacles are analysed here in detail by the author. A change in parental attitude (lack of will) towards girls' higher education, he feels, could help bring in a major break-through.

WOMAN HAS BEEN GIVEN A RESPECTABLE position in Indian society. The saying in Sanskrit literature, that "Yatra Naryastu Pujayante Ramante Tatra Devatah" reveals the ideal status of women in Indian culture. She has been recognised as the first guru of the child in our Vedas. Infact, more than 50% manners, morals and habits of children are influenced by their mothers. It is therefore, argued that for moulding and formulating the character of children during the most impressionable years of infancy, education is necessary for women. Further, education develops the ability to earn and creates self-expression and personal development among women. It also enables them to utilise their full potential for their productive roles in the family and community, which, in turn, stimulates the economic development of a country.

Article 29 (2) of Indian Constitution provides equal rights to women for education. But women still lag far behind men in higher education.

In the light of the foregoing, the main thrust of this article is two-fold: one is to examine the existing gap between boys and girls' enrolment in higher education and the other is to analyse the regional imbalances.

Level-wise enrolment

The level-wise enrolment figures for girls and boys have been incorporated in table-1. The table reveals that though there is a tremendous increase in girls' enrolment and the enrolment figures for girls have increased from 46.6 thousand in 1950-51 to 13.85 lakh in 1981-82, the disparity in relation to the boys' number is striking. The girls share only 28% in the total enrolement of higher education, while in the developed countries, the proportion of women's enrolment in higher education varies from 39% in U.K. to 51% in Canada. If we take, the percentage of women in higher education in the age group 17-23 years, the picture is very depressing. Only 3% of the female population in the age group of 17-23 years get themselves enroled in the institutions of higher learing against the boys' ratio of 7% in the respective age group. Thus, from this analysis, it can, safely be concluded that women still lag far behind men in higher education and whatever progress has been done in this field, is nothing to be proud of.

The percentage of girls' enrolment in the higher secondary education is 29% followed by 35% in the High Schools, 37% in the middle schools, 38% in primary schools and 45% in the pre-primary schools. From this analysis, it emerges that as the level of education moves upward, the women's participation in education (measured in terms of the percentage of total enrolment) shifts downward. It is lowest in higher education (29%) and highest in the per-primary or pre-basic education.

Regional disparity

One of the various problems with regard to the spread of higher education among women is the uneven distribution of girls enrolment across the Indian states and Union Territories. Since this phenomenon has its implication for the larger participation of women in wider life. An analysis of girls enrolment in higher eduction among the various states and union territories has been attempted below.

The percentage of boys and girls enrolled in the institutions of higher learning in the various states has been provided in table 2. The states can be divided into 3 groups:

Group A

These are the states in which girl's enrolment in higher education is more than all India average (i.e. 29%). Eleven states fall under this category, Jammu and Kashmir, Kerala, Maharashtra, Manipur, Meghalaya, Punjab, Tamilnadu, W. Bengal, Chandigarh, Delhi and Goa. In these states the percentage of girls' enrolment varies from 35% in Maharashtra to 48% in Kerala.

[illegible] states are covered under this category: [illegible], Haryana, Karnataka, Nagaland and Mizoram. In [illegible] the percentage varies from [illegible] to 25%.

Group C

The states falling under this group have the enrolment percentage lower than the all India average. Eight states are counted under this group: Bihar, U.P., Rajasthan, Orissa, Sikkim, Himachal Pradesh, M.P. and Assam. The percentage varies from 15% in Bihar to 25% in Assam.

There are various obstacles which come in the way of female higher education. Important among those are: parental educational and economic background, lack of will in the parents towards girls' higher education, inadequate transport facilities, shortage of colleges and universities in rural areas, fear of girls molestation, urbanisation and modernisation etc.

But here, we have confined ourselves only to examine the two factors, namely, the urbanisation and the level of per capita income in the states. Rank correlation method has been applied to find out the correlation between the percentage of urban population and the percentage of girls' enrolement in higher education. The results show that there is a substantial correlation between these two variables and the co-efficent of correlation worked out to be is +.54. Thus urbanisation is one of the important factors affecting the females' participation in education in general and in higher education in particular. The explanation for it is that in urban areas there is awakening among the people and there are seperate girls' colleges for general and professional education besides the co-ed colleges and universities and therefore, the girls have not to face difficulties and inconvenience of going outside for higher education.

In the same way, a close and high degree of rank correlation exist between per capita income and percentage of girls enrolment in higher education. (r = +.71). This leads to the conclusion that the girls of the higher strata of the society have been comparatively benefited in the field of higher education. However, further indepth investigation is required in this direction to answer the questions: Who among the women go to a college or university? What segments of women take benefit of women's higher education? Although open to all, to what extent the higher education remains confined to the higher strata of the society?

Faculty-wise enrolment

The girls' enrolment concentrates in the limited faculties (Education, Humanities and Medicine). Out of those enrolled in the Department of Education (Teachers' Training) in 1985-86, 44% were girls. In [illegible] faculty the percentage of girls enrolment at graduate [illegible]

[illegible] preferred faculties for women and women rarely go [illegible] engineering and architecture courses.

Although women generally are no longer [illegible] from pursuing education in any faculty [illegible] formal regulations or quotas, there are a number [illegible] barriers to women's free choice of fields of study[illegible] primary one is the limitation of job opportunities [illegible] career choices. Teaching job being an easy, [illegible] and less time bound is preferred by women. W[illegible] making inroads into traditionally male dominated [illegible] such as the hard science and technology, but often [illegible] find their job options limited to low level, low [illegible] positions or they may quickly reach a plateau [illegible] where no further advancement seems possible.

Conclusion

In spite of the tremendous increase in the [illegible] enrolment in higher education, disparity in relation [illegible] the boys' number is striking. Only 3% of [illegible] population in the age group of 17-23, go to high[illegible] education. The problem becomes more acute when [illegible] take into account the regional disparity accross Indi[illegible] states. The urbanisation and the level of per capi[illegible] income among various states are two of the [illegible] important factors affecting women's participation [illegible] higher education in Indian situation. The faculties [illegible] humanities, medicine and education are still preferr[illegible] faculties for women and women rarely go [illegible] engineering and architecture courses.

Table 1

Enrolment in educational institutions by level and sex in India 1981-82

	Institutions	Enrolment BOYS	Enrolment GIRLS	TOTAL
(*) (A)	Institutions of Higher Education	3625824 (72.34)	1385961 (27.66)	[illegible]
(B)	Intermediate (Pre-Degree/Junior Colleges	44054 (72.90)	16373 (27.10)	[illegible]
(C)	Higher Secondary Schools	6828210 (70.84)	2811280 (29.16)	[illegible]
(D)	Middle/Senior Basic Schools	10674602 (64.94)	5765259 (35.06)	[illegible]
(E)	Primary/Junior Basic Schools	3370977 (62.07)	20804096 (87.93)	[illegible]
(F)	Pre-Primary/Pre-Basic	374964 (54.55)	312348 (45.45)	[illegible]

Source: Education in India 1981-82, Volume I.

(*) These Institutions include:

(i) Universities (ii) Institutions deemed to be universities [illegible] Research Institutions (iv) Institutions of national importance [illegible] All institutions of degree standard and above. (vi) All [illegible] imparting instructions in post matric diploma/certificate [illegible]

Progress of female literacy in India

S. Irudaya Rajan

Time and life-styles moulded by religious, cultural and other whimsical decisions, not backed by reason or logic, have deprived women of their status, privileges and rights. The author feels that education can bring about a proper turn of events. Post-independence era has registered a tremendous growth in the number of female educational institutions; but not in female education. Can the new education policy do it ?

Women, who constitute about half of the world population, have been demanding for equal wage, equal opportunity, equality in education and status with their counterparts. Although, the International Decade for Women (1975-85) has already been over since two years, it is a sad fact that they are not getting equal opportunities even in the most basic necessity of life like education.

As human beings, it is recognised and understood that male and female are equal in status and in other social aspects of life. Since time immemorial, the females have been provided with priority of status and rights in the society and not only they have an access to political decisions but also they enjoyed unquestioning and unsuspicious privilege of every movements in the society. But with the onset of time and ongoing life-style moulded by cultural, religious and several other decisions taken whimsically and suited practically to some desires not often backed by reasoning or logic gave birth to many evils like superstitious attachment to females and their way of life. All of these made them introverts and inside defined with their rights confined to child bearing and taking care of domestic life. In order to free this other side of humanity who are not only being deprived of their rights, but are also being misguided, mistreated and tortured in the hands of a society because of a weak decision taken, we have to have understanding and moral courage.

In order to allow them to have their basic amenities of life, to survive the moralities and justice, we have to give them an improved status (equality) and better future. A more meaningful approach can be emphasised through improving and providing them with education as a beginning. This has been stressed by experts all over the world.

India prevails in several serious customs, culture, dissimilarities with lots of superstitions and stigmas. Quoting Dr. Altekar, "Society had general prejudice against female education. It was believed that a girl taught to read and write would become a widow. It may therefore be stated in the advent of British rule, female education has practically disappeared from the Hindu society" Astonishingly, the history reveals that the society victimised the females from birth to death.

Perhaps, no date in the history of Modern India is of greater importance in the emancipation and education of the Indian women than the date of our freedom. India attained independence from the clutches of British rule on 15th August 1947. Its constitution enforced on 26th January 1950, proclaims India as a sovereign, socialist, secular, democratic republic and promises all its citizens justice, liberty, equality and fraternity.

The Constitution of India provides women with a set of fundamental rights where they enjoy the following:

The Article 15 (1) of the Constitution reveals "the state shall not discriminate against any citizen on grounds only of religion, race, caste, sex, place of birth or any of them".

Article 16 (1) of the Constitution proclaims "there shall be equal opportunity for all citizens in matters relating to employment or appointment to any office in the state."

Article 45 of the Indian Constitution says "the state shall endeavour to provide within a period of 10 years from the commencement of this constitution for free and compulsory education for all citizens until they complete the age of 14 years."

If we carefully study the present situation of female education in India, we would rather come out with interesting findings.

Figures at a glance

India is the seventh largest country in the world. According to the 1981 census, the population of India was 685 million (including the projected population of Assam, where the 1981 census could not be conducted owing to disturbing conditions prevailing at that time); out of which females account for 331 millions.

The census data also reveal that 41 million females belong to the age-group 0-4, 45 million in 5-9, 40 million in 10-14 and 30 million in 15-19.

Progress of literacy

The nation's primary concern is to provide free and compulsory education to its millions of children. The goal of achieving this task is possible only through increasing enrolment and see to it that those who are enrolled are not wasted. Sometimes, it may happen that the size of the population itself retards the developments in educational measures.

Census year	*Percentage of literates to total Popn.*	*Percentage of male literates to male Popn.*	*Percentage of female literates to female Popn.*
1901	5.35	9.93	0.69
1911	5.92	10.56	1.05
1921	7.16	12.21	1.81
1931	9.50	15.59	2.93
1951	16.67	24.95	7.93
1961	24.02	34.44	12.95
1971	29.46	39.45	18.72
1981	36.23	46.89	24.82

Literates are defined as those who can read and write with understanding of any language. An analysis of the table presented above, indicates that the progress of female literacy achieved during the 80 years from 1901 to 1981 has been only meagre. In 1901, the percentage of female literates to total female population was 0.69 percent whereas it increased to the level of 24.82 percent in 1981.

At the time of 1951 census i.e., immediately after independence, there were 92 illiterate females for every 100 females in India. It is understandable that it is not an easy task for a nation which has emerged from the clutches of foreign rule, to eradicate illiteracy of its teeming million within a short period of time. It may be pointed out that within a period of 29 years after independence, only 18 per cent female literacy could be achieved.

When we study the difference between male and female literacy, it indicates that there is a wide disparity in the male-female education. Over the years, the difference has come to the level of 9 per cent to 22 per cent during the period under consideration. It is a matter of concern because more than 60 percent of the Indian population lives without education.

A state-level analysis

According to the 1981 census, among the states, Kerala has the highest female literacy rate with 64.48 per cent whereas Rajasthan recorded the lowest level of 11.32 per cent. Among the Union Territories, Chandigarh has the maximum number of female literates.

The situation of female education beween 1971-81 reveals that, almost all states have improved their literacy rates for females. Closer examination of the data reveals that Kerala is the only state where more than fifty percent of females are literate at both the census. In other words, Kerala maintains the first rank in the level of female literacy in 1971 and 1981. Among the U.T.s., Chandigarh has the highest level of female literacy with 54.35 percent in 1971, whereas in 1981, there were two more Union Territories (Delhi and Mizoram) achieving female literacy rate more than 50 per cent.

In 1971, out of 22 states, five states have registered themselves within the level of female literacy rate between 25 to 50 percent, but this number has increased to 12 in 1981. It indicates that there has been a lot of improvement in the educational sphere to enhance the literacy rate. Still more is to be achieved in the case of backward states.

Educational institutions

The post-independent era has been one of rapid expansion as far as the quantitative aspect of women's education is concerned. However, the apparent progress cannot be described as satisfactory in relation to the overall expansion of educational institutions in the country. The education of girls and women in the last three decades leaves much to be desired.

Educational Institutions	*Institution for girls 1950-1978*		*Institution for boys 1950-1978*	
Universities and Research Institutions	1	1	42	151
College of General Education	66	675	401	5590
College of Professional and Technical education	17	463	169	1812
College of Special Education	6	60	60	459
Secondary Schools	997	1451	5665	8158
Middle Schools	1588	10137	11332	99699
Primary Schools-	13972	29551	190854	433016
Other types of Schools	7420	6208	46693	30678
Total	24067	53356	255236	610289

The above statement reveals an astonishing picture of the disparity between the educational institutions for boys and girls and that of men and women at different levels. The number of recognised educational institutions in the country has increased from 279303 in 1949-50 to 663645 in 1977-78 and an estimated level of 755000 in 1984-85.

Though the sex ratio of females per 1000 males in India was 933 in 1981, there is lot of bias towards males, even in the government side? For instance, the educational institutions for girls have increased from 24067 in 1949-50 to 53356 in 1977-78 whereas the boys' educational institutions have shown an increase from 255236 in 1949-50 to 610289 in 1977-78. How can a female be educated without proper availability of educational institutions. ? It deserves serious attention among the planning machinery. If the Government does not provide the education facilities for women equal to men, it may not be possible to achieve equality in education.

Take an illustrative example of the situation of primary schools. According to 1981 census, 48 million males and 45 million females are enumerated in the age group 5-9 who are the possible children to attend primary schools. As the data issued by the Ministry of Education and Culture reveal, in India we have 29551 primary schools for girls against 433016 for boys in

1977-78. Even if the girls want to go to school, where can they be accommodated ? Is it not important for the Government of India to consider this accormmodation problem ?

Present situation

An attempt has been made to analyse the present situation regarding the attendence rate. For better understanding of the prevailing situation, the data is presented in single age by percentage attending and not attending schools in 1981.

It is relevant here to quote the expenditure on education. The annual non-plan expenditure on education from the central and state budget has increased more than 50 times over the last 35 years, from Rs. 114 crore in 1950-51 to more than Rs. 6000 crore in 1984-85. Though the expenditure on education increased over 50 times, it did not enance the enrolment rate even 5 times.

Age	*Percentage attending schools*		*Percentage not attending schools*	
	Males	*Females*	*Males*	*Females*
6	36.19	27.14	63 81	72 86
7	54.38	40 13	45.62	59.83
8	57.04	39.47	42.96	60 53
9	69 54	49.37	30.46	50.63
10	61.97	39.62	38.03	60.38
11	72.30	47.88	27.70	52.12
12	59.48	34.56	40 52	65 44
13	63.98	37.18	36 02	62.82

Data presented above reveals a clear picture about the educational situation of females in India. At age 6, out of 100 females, 73 were not attending school at all and this is almost remaining constant (70) even at the age of 14. At the beginning, the disparity between males and females who are attending schools was calculated as 9 persons, but this increased to 27 when they complete the secondary school. Who should be blamed for this ? The society itself operates against the female education even though we have powerful female ministers at the centre and state level. According to the 1981 census, 26 million female children in the age group 5-9 and 22 million in the age group 10-14, are still not attending schools.

"No nation can move into the 21st century without integrating women—the makers of the new generation-into the national mainstream" said Margaret Alva, Union Minister for Human Resource Development in a key note address at the Seven-Nation SAARC (South Asian Association for Regional Co-operation) meeting on "women in development" held in Shillong.

"The ultimate aim of India's new education policy' according to Mrs. Alva "is to get all girls in the 6-14 age groups into schools and to provide universal, free and compulsory education". This is a challenge for the new education policy. Can we expect that our new education policy will send more children to schools and reduce drop-outs ? ❑❑❑

(Contd. from page 14)

progress in qualitative terms. A policy that accepts this logic would also help the government's employment-oriented programmes which now receive only sporadic often inconsequential attention.

The New Education Policy came out with a big bang for inducting vocational education in the whole system but nothing of the sort has really taken place. Neither degrees have been delinked from jobs, nor vocational education strengthened. So far, whatever vocational training we have, it has failed to attract students. As such, it is time to develop certain basic aspects of our curriculum. The general and the liberal courses of study should be integrated with work-oriented courses so that students involve themselves in community services and off-campus activities. There should be an interweaving of general education with employment motivation. While general education encourages understanding, vocational education should help prepare an individual to work more effectively General education may give general information and vocational education should help acquire special skills. This interweaving will lead to a great deal of social stability. Both should be developed in response to specific and urgent needs of urban and rural areas. Special attention should be paid to under-privileged people who desire to enter the mainstream of the country's economic and social life

The Central Government should identify under the National Testing Service (NTS) jobs for which recruitment requirements could be reviewed and insistence on formal degrees as minimum qualification could be dispensed with. This review should also be done by State governments, public sector units as well as private enterprises. All these agencies could go by the NTS procedure pronouncing whether a candidate is qualified for a particular job or not. In fact, the NTS should ultimately have a larger canvas, say, for instance, for entry to educational institutions at various levels throughout the country. ❑❑❑

Development of waste-lands in 146 districts

The National Wastelands Development Board will undertake detailed-village level planning for integrated development of wastelands in 146 districts comprising over 15 per cent of the total areas as wastelands.

There are 175 million hectares of such degraded land in the country. Integrated development of these 146 districts, identified under the National Wastelands identification Project with the collaboration of National Remote Sensing Agency, has been envisaged to give a thrust to the afforestation programme undertaken by the Board. The target set for afforestation had fallen short during the Seventh Plan period.

The total area brought under afforestation during the four years of the Seventh Five Year Plan would be around seven million hectares. By the end of the Seventh Plan, this is likely to reach 10 million hectares.

Doing without degrees

Navin Chandra Joshi

In this article the author forcefully and convincingly argues for delinking of degrees from employment and for re-fashioning of job-specific courses. The 'taboo' of a degree for a job has so devalued our education sytem that no price is considered too high to secure it irrespective of whether or not the degree brings with it the attendant knowledge too. Education has become pure business. Lamenting over this unfortunate state of affairs, the author vehemently pleads for implementation of the new education policy so that education is pursued for knowledge and not purely for a degree.

AS IS WELL-KNOWN, the Indian education system has been facing the crisis of credibility. This is due to the system's inability to face the multiple challenges it is confronted with. The challenges which result from the defects in the education system, especially in the educational institutions of higher learning, are lack of economic viability. purposeless instruction, deteriorating standards, and politicalisation in institutions at all levels. The sooner these challenges are met with effectively the better it would be for the coming generations of students, as otherwise serious damage to the quality of our national life and its ethos is writ large as the first casualty.

The increase in numbers of students, with all its attendant effects on quality or standards, is also an important issue as far as the cost of education is concerned. The crisis of mounting costs and the growing dependence on governmental resources have not received any serious consideration by our educational planners. Today a vast majority of the hitherto good institutions imparting higher education are running the risk of being classified as 'sick institutions' while also flagrantly violating university statutes and rules. Taking congnisance of the fact that a large number of non-viable colleges with a low enrolment and inadequate facilities have come into existence, the University Grants Commission (UGC) has often warned that this tendency will be curbed. But then, we see that a number of State governments have been setting up new universities every year.

increase of institutions

In fact, it had become evident almost a decade ago that the increase in the number of institutions of conventional higher education was not only redundant but was bound to result in a sharp deterioration in standards. Yet the new institutions are created for general education with a view to placate political pressure groups. At present, there are more than 155 universities with a total of about 35 lakh students. It is estimated that we are going to have at least about 50 lakh students by 2000 A.D. and for them 200 universities would be required. This year the Indira Gandhi National Open University, New Delhi has made a call nation-wide to all and sundry for obtaining degrees of general nature. This invitation through the national press and all other media has encouraged people of any level of education to crave for a degree just for the sake of becoming graduates.

Outdated curricula and poor standards in these institutions have resulted in vast numbers of ill-qualified swelling the ranks of the unemployed. Though the Centre brought education in the concurrent list some years back to solve precisely such problems, it too has done little except formulating recently the New Educational Policy which is yet to take off as far as higher education is concerned. The Policy states that "Delinking (of degrees) will be applied in services for which a university degree need not be a necessary qualification. Its implementation will lead to a re-fashioning of job-specific courses and afford greater justice to those candidates who, despite being equipped for a given job, are unable to get it because of an unnecessary preference for graduate candidates." This pious declaration has not been applied as yet in any field of national activity though the Policy was laid down in 1986. Instead, the craving for degrees of general nature is being encouraged to the maximum extent. For what reasons, nobody knows. Private colleges continue as money-making business for those who run them. While students are taxed in the name of raising funds for buildings and other facilities, the managements appropriate substantial grants from the UGC and State governments on false pretexts.

Most of the instruction imparted in colleges and universities has become totally irrelevant to the needs of our society. This defect has been recognised by

various commissions and committees which went deep into our educational process but nothing has been done to remove the obvious defects. Still, all higher education remains, by and large, academic and does not equip students to face the realities of life or to exhibit excellence in most areas of their activities. Disfunctional education imparted in higher institutions has no commitment to its obligation towards the community. Its major aim has become one of turning out degree-holders whose competency remains in doubt unless otherwise tested.

Education not job-oriented

The situation is that the kind of education that India has does not give jobs to as many as 85 per cent of people who have the highest degrees. And yet, the government has to incur more than Rs. 1,500 a year to educate a university graduate in general education. Already, much of what is happening in the academic world seems oriented towards devaluing the concept and ideal of higher education into a cheap, commercial commodity, called the university degree.

Every new academic session draws thousands and lakhs of aspiring youngmen and women to the portals of our universities. The vast majority of them, however, come not for any higher education as such, but for acquiring the dubious possession of a university degree. For this, the youthful aspirants are not so much to blame as the socio-economic structure which puts a premium on the degree as a passport to all kinds of employment.

Role of universities

An important question to consider is: Do students come to our universities in order to learn something ? This is a question which has eluded the 'educted' as well as the 'educators'. In Delhi itself, one sees a couple of new colleges opened each year to cope up with the rush of 'immigrants' from schools. In fact, the vast majority of them are really 'refugees' who ask for shelter having no other place to go. So great is the craving for a degree that no price is considered too high. And so low is the longing for knowledge that no measure of effort seems worth its while. The degree holder is finally turned over to the second phase of his life as a marketable commodity in the employment market. He is not bothered with what the market has to offer. What the society gives, he must take. What the rules ordain, he must follow. The social structure pushed him to the degree course. He never pulled himself to it or, for that matter, to the content of education that the degree is supposed to represent. And this brings us to the meaning and value of the university degree that every young man and woman in India aspires to possess.

Is degree a must ?

Today, almost all white-collar jobs require the possession of a degree as a basic qualification for entry. This is true of jobs both in and outside the government. Most of the office jobs have been equated to the university degree qualification. The clamour for degrees rises in proportion to the pressure for entering the clerical services. And the same degree is the basic requirement for entry into higher services. Thus, posts which have no comparison in any respect with each other have a common minimum qualification for entry, namely the university degree.

The position is that whoever wants to earn a living must attend a college to acquire a degree. May be, clerical posts are linked to a degree because the quality of the degree holders has been going down. It is true that the standards of education, both at lower and higher levels, have visibly fallen. How is it that the standards have fallen and are falling year after year when our educational institutiens, as a whole, are better equipped today than before, when more qualified persons are available for teaching and when modern scientific methods can be had for imparting education ? Many educational reforms have also been put through but the deterioration in standards is not being arrested. The explanation appears to lie in the unwieldy number of students which our schools and colleges find impossible to hold. In the world of economics, there is an optimum level or size, beyond which diseconomics set in. Similar is the case when the intake of students becomes disproportionate to the optimum capacity of an educational institution. Our class rooms are vastly denser. A university teacher has to shout at the top of his voice to be heard by back-benchers. What then is put to test is not his cerebral mechanism but his respiratory system.

we must appreciate that higher education is still a luxury in India but even the limited resources and manpower are being frittered away leading to a galloping devaluation of standards and academic integrity. While politicians have often played with the ebullient fervour of youth for their own narrow ends, both teachers and parents have, of late, been taking the line of least resistance and disowning their responsibilities for the welfare of their wards. Students are a privileged community, free from the anxieties of existence and much less exposed to the realities of life. No doubt, they have their own problems but these are far less corrosive than those afflicting millions of wage earners. While they should naturally take an interest in events around them and also try to improve academic life and its content, strikes and gheraos on the slightest of provocations only ruin their careers and cost the nation dearly. It is high time the student community as a whole realised its duties and responsibilities. The alternative, however desperate it may sound, will be to close down all the seats of higher learning until there is a greater appreciation for learning itself.

Obviously, the country does not need, nor can it afford, an ever-increasing army of clerks. As such, after the higher secondary stage, most of them need to be diverted to vocational education stream for learning various trades, etc. Once the educational structure as a whole is geared to the needs of those who really seek and deserve intellectual light, it would be easier for society to

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Consumer protection legislation : a critique

Dr. S.N. Singh

The Consumer Protection Act, 1986 was enacted by Parliament to provide for better make protection of the interests of consumers and to make provision for the establishment of consumer councils and other authorities for the settlement of consumer disputes. The author here makes a critical appraisal of the Act saying that one positive aspect of the new legislation is that it is applicable even to enterprises in the public sector, finanical institutions and cooparatives. He discusses the adjudication process envisaged in the bill for the disputes on account of consumer protection, at the three levels, i.e., district, state and the centre. The author feels that efforts should be made to harmonise the functioning of all the these adjudicating bodies so that one does not hinder the functioning of the other so as to harm the consumer interest.

IN RECENT TIMES, ONE OF THE MOST significant areas of economic regulation all over the world has been the adoption of consumer protection legislations in a big way. In India, many such laws have been enacted by Parliament to protect the interests of consumers since Independence, but the most important is the Monopolies and Restrictive Trade Practices Act 1969. The Act was amended in 1984 on the recommendations of the Sachar Committee with a view to controlling unfair trade practices which are harmful to the consumers.

The month of December 1986 can legitimately be considered as Parliament's session for consumer protection when marathon race of legislative activity was undertaken to protect the interests of consumers. In just two days, both the Houses of Parliament passed seven amending legislations aimed primarily at empowering an aggrieved person or a recongnised consumer association (whether the person aggrieved is a member of such association or not) to approach the prescribed authorities under the respective legislations for relief. This was earlier considered to be a serious lacuna, which was partly responsible for their ineffectiveness. Parliament also enacted another legislation, viz, the Bureau of Indian Standards Act 1986 to replace the Indian Standards Institution (Certification Marks) Act 1952 with a view to providing for the establishment of a bureau of Indian standards for harmonious development of the activities of standardisation, marking and quality certification of goods.

The new Act

Parliament further enacted an altogether new legislation *viz.*, the Consumer Protection Act 1986 to provide for better protection of the interests of consumers and to make provision for the establishment of consumer councils and other authorities for the settlement of consumer disputes. The Act is applicable to all goods and services. The term "consumer" has been defined under section 2 (1) (d) to mean any person who buys goods or hires any service for consideration, paid or promised, and includes user of goods using them with the approval of buyer but does not include a person who obtains goods for resale or for any other commercial purpose. The term "person" includes a firm, registered or not, a Hindu undivided family, a co-operative society and every other association of persons whether registered under the Societies Registration Act 1860 or not.

One salient feature of the Act, which is certainly an improvement over other consumer protection legislations, is that it is applicable even to enterprises in the public sector, financial institutions and co-operative societies. This widens the scope of this Act as compared to others. Moreover, its provisions are in addition to, and not in derogation of, the provision of other laws.

The councils

The Act seeks to provide for the establishment of advisory as well as adjudicatory bodies, both at the central and state levels. The Central Government may establish the Central Consumer Protection Council consisting of the Minister in charge of the Department of Food and Civil Supplies of the Government of India as its chairman and such number of other official and non-official members representing such interests as

may be prescribed. The council is to perform an advisory role to promote and protect the rights of consumers, such as the right to be informed about the quality, quantity, potency, purity, standard and price of goods; right to be assured access to a variety of goods at competitive prices; right to be heard at appropriate forums; right to seek redressal against unfair trade practices or unscrupulous exploitation of consumers; and right to consumer education. On the same pattern and with the same objective, a consumer protection council at the state level is also envisaged.

Adjudication

The Act provides for the establishment of adjudicator bodies at three different levels—district, state and national. At the bottom, there is the consumer disputes redressal forum (district forum) in every district to be established by the state government with the prior approval of the Central Government. It shall consist of a president who is, or has been, or is qualified to be a district judge to be nominated by the state government and two members—a person of eminence in the field of education, trade or commerce and a lady social worker. The members hold office for a term of five years or up to the age 65 years, whichever is earlier, and they are not eligible for reappointment.

The district forum has jurisdiction to entertain complaints where the amount or value of goods or services and the compensation, if any, claimed is less than one *lakh* rupees. A complaint could be filed by a consumer, any voluntary consumer association, registered under the Companies Act 1956 or any other law, or the Central or any state government. It may relate to any allegation that the complainant suffered loss or damage as a result of any unfair trade practice, that the goods suffered from any defect—fault, imperfection or shortcoming in the quality, quantity, purity or prescribed standard; that the services rendered suffered from any deficiency—any fault, imperfection, shortcoming or inadequacy in quality, nature and manner of performance or that more than fixed or displayed prices were charged for the goods. The forum has to decide a complaint after hearing the parties and, if necessary, after seeking a report from the appropriate laboratory about defects in goods. The proceedings before the forum are judicial proceedings and it is vested with the powers of a civil court in various matters concerning its procedure in the disposal of complaints. The district forum has power to issue order to the opposite party to remove the defect, to replace the goods, to return the price or other charges and/or to pay compensation to the consumer for the loss or injury suffered by him due to the negligence of the opposite party. The order of the forum is appealable to the State Consumer Disputes Redressal Commission (state commission) within 30 days from the date of the order. One objectionable provision about the procedure of the forum is contained in section 13(3) which provides that if the prescribed procedure has been followed, its proceedings shall not be called in question in any court on the ground that the principles of natural justice have not been complied with. It is submitted that this kind of privative clause cannot oust judicial review because the procedure prescribed may not be appropriate to ensure justice in a case.

State Commissions

The next adjudicatory body in the hierarchy is the state commission which, in addition to appellate jurisdiction against the orders of district forum, has original jurisdiction to entertain complaints where the value of goods or services and compensation, if any, exceeds one lakh rupees but does not exceed Rs. 10 lakh. The commission shall consist of a person as its president, who is, or has been, a judge of a High Court, appointed by the state government, and two other members who shall be persons of ability, integrity and standing having knowledge, experience or capability in dealing with problems relating to economics, law, commerce, accountancy, industry, public affairs or administration. One of the two members has to be a woman. If a sitting High Court judge is to be appointed as president, prior consultation with the Chief Justice of the High Court is essential. The power to pass orders and the procedure of the commission will be the same as that of the district forum. Its order passed in exercise of the original jurisdiction is appealable to the National Consumer Disputes Redressal Commission (national commission) within 30 days of the order. One significant provision of the Act is section 17 *(b)* which confers power on the state commission to correct jurisdictional errors committed by district forum, *viz.*, failure to exercise jurisdiction, exercising jurisdiction not vested in it or acting illegally or with material irregularity in exercise of its jurisdiction. The illegality or irregularity may arise when the district forum decides a question without giving an opportunity to be heard to the party affected by the order or where the procedure adopted in dealing with the complaint is opposed to the principles of natural justice. This power is, strictly speaking, a power of judicial review conferred on the High Courts under Article 226 of the Constitution to issue a writ of *certiorari* to correct errors of law and jurisdiction committed by lower courts and tribunals. The state commission can exercise this jurisdiction in respect of a complaint, whether pending or finally disposed of. This power, however, does not entitle it to correct findings of fact arrived at by the district forum.

National Commission

On the top of the adjudicatory set up is the national commission vested with appellate jurisdiction against the orders of the state commission and original jurisdiction in respect of complaints where the value of goods or services and compensation, if any, exceeds Rs. 10 lakh. It is vested with power of judicial review in the same manner as vested with state commission in respect of dispute pending or disposed of by it. The national commission consists of a person as its president, who is, or has been, a judge of the Supreme Court, to be appointed by the Central Government, and four other members who shall be

persons of ability, integrity and standing, having adequate knowledge, experience or capability in dealing with problems relating to economics, law, commerce, accountancy, industry, public affairs or administration. One of the members must be a woman. If a sitting judge of the Supreme Court is proposed to be appointed as president, prior consultation with the Chief Justice of India is mandatory. The national commission is vested with powers of a civil court on the same pattern as the district forum.

Appeals

An order of the national commission, in exercise of its original jurisdiction, is appealable to the Supreme Court within 30 days of its passing. The court may, however, entertain an appeal even after 30 days if it is satisfied that sufficient cause is shown for not filing the appeal within prescribed time. It may be mentioned that the appeal is expected to be only against the final orders of the commission disposing of the case and not against the interim orders. Except for the provisions of appeal, the orders of the district forum and state and national commissions have been given finality. Unfortunately, the grounds on which appeal could be filed to the state and national commissions or the Supreme Court have not been mentioned. It is, therefore, expected that an appeal would be a routine one on all available grounds. This sort of liberty does not seem justified. At least for filing appeal to the Supreme Court, grounds such as those which are covered under section 55 of the Monopolies and Restrictive Trade Practices Act could and should have been mentioned.

The orders of the district forum and state and national commissions are enforceable by them in the same manner as a decree or order of a court; in case of their failure to enforce the order, the same may be sent to the court of competent jurisdiction for enforcement. A person or trader who fails or omits to comply with the order is punishable by the district forum or state or national commission for a minimum term of one month which may extend up to three years or with a minimum fine of Rs. 2,000 which may extend up to Rs. 10,000 or with both. Lesser than the minimum imprisonment or fine may be imposed if the circumstances of a case so require. The frivolous or vexatious complaints may be dismissed without any further proceedings. Protection from any suit, prosecution or other legal proceeding has been given to the members of the district forum and state and national commission and their officers or other persons acting under their direction for executing any order or for anything done under the Act or the rules in good faith.

In the area of delegated legislation, in exercise of Henry VIII Clause, the Central Government has been given power to make provision, by issuing order in the official gazette, for giving effect to the provisions of the Act if any difficulty arises. The order, however, should not be inconsistent with the provisions and the power must be exercised only within two years from the commencement of the Act. This time limit is a good check on the exercise of power under the otherwise uncherished clause. Both the Central and state governments have been given rule-making powers in their respective jurisdictions. The rules are required to be published in the official gazette and laid before Parliament and state legislatures when made by Central and state governments respectively.

The lacunae

The Act seems to have been enacted in a great hurry. This is why many significant aspects have not been covered or foreseen. Thus there is no provision for giving interim relief or issuing interim injunction which may be necessary in some cases. There should also have been provision for specific performance of a contract because of which a consumer is likely to suffer loss or damage. There is no provision for appointment of acting president in case of a temporary vacancy because of illness or otherwise of the president. A provision should be made for the appointment of the seniormost member to be acting president.

It is unlikely that sitting judge of the High Court or Supreme Court would be willing to accept presidentship of the state or national commission, because it cannot be considered to be equal to the status of a judge. Further, there would hardly be any difference in the age of retirement of a judge and president, and, therefore, no retired judge would be available to man the commissions. A provision should be made in the Act that a person who is qualified to be appointed as a judge of the High Court or Supreme Court can be appointed president of the state or national commission, as the case may be.

The independent full-fledged adjudicatory set-up provided by the Act is no doubt welcome but it may create jurisdictional problems because of overlapping. Almost all the aspects of sale of goods would also be covered under the Sale of Goods Act 1930 and, therefore, falling within the jurisdiction of the civil courts which have power to give declaratory, compensatory and injunctive relief. Most of these aspects would also fall within the purview of the Contract Act 1872. The control of unfair trade practices is an area entrusted to the Monopolies and Restrictive Trade Practices Commission under sections 36A to 36E of the 1969 Act. Though the High Courts have not been assigned any role under the Act, they enjoy their constitutional powers under Articles 226 and 227 which have not been ousted. These courts would, therefore, exercise their powers whenever called upon to do so. This would frustrate the very purpose of not assigning them any role under the Act. Besides, a large number of administrative and quasi-judicial bodies have been established under a large number of consumer protection legislations to exercise powers in many areas which would also fall within the purview of the present Act. Efforts should be made to harmonise the functioning of all these courts and authorities so that one does not hinder the functioning of the other so as to harm the consumer instead of protecting him. ☐

National Commission on Urbanisation submits report

THE NATIONAL COMMISSION ON URBANISATION headed by the eminent architect, Shri Charles Correa, submitted its report to the Government in New Delhi recently. Thanking the Commission, the Urban Development Minister, Mrs. Mohsina Kidwai, expressed the view that the Commission's report would generate public opinion about the state of urbanisation in the country. The Commission was constituted in October,1985 at the initiative of the Prime Minister to identify priority action areas and formulate specific guidelines for an action plan for managing rapid urbanisation.

The strategy

After discussing a wide spectrum of urban issues arising out of the inter-play of factors like rapid population growth, inadequate infrastructure, financial constraints, scarce land resources etc. the Commission has come up with specific suggestions on a broad range of policy interventions necessary to bring about more efficient urban settlements which could generate rapid economic growth with equity and social justice. The strategy that has been proposed by the Commission involves the dispersal of urban population among a larger number of settlements by:—

- (i) consolidating the economic base of cities and towns which have a potential for generating high rates of economic growth;
- (ii) accelerating the development of predominantly rural districts to arrest the relentless outmigration from the rural hinterlands to larger cities;
- (iii) giving an impetus by way of larger investment for the upgradation of infrastructure to sustain the growth of urban areas; and
- (iv) devising population control measures to stabilise the urban situation.

Keeping in line with the above strategy, the Commission identified 329 urban centres whose economic and physical bases are to be consolidated, strengthened and expanded. These are described as GEMs (Generators of Economic Momentum), which fall into 49 Spatial Priority Urbanisation Regions (SPURs). The Commission is of the opinion that for urbanisation to play a major role in the development process, the Planning Commission and the State Governments should view urbanisation in the total development context and allocate resources which will ensure optimum utilisation of the natural and human resources within each of these SPURs.

To accelerate urban development, the Commission has recommended that the current share of about 4 per cent of the total plan allocation for the urban sector in the Five Year Plan be raised to 8 per cent. Half of this allocation should come from the Central sector. To ensure predictable and adequate devolution of funds from the State Governments to local bodies, a Constitutional amendment is proposed for setting up quinquennial State Finance Commission.

In the Indian context, the Commission observes that the preponderance of the poor should be taken as the principal concern of urban planning. The physical planning of our cities must therefore change dramatically to achieve the sensitivity to the requirements of low income groups and informal sector for shelter, employment, basic services and finance. To ameliorate urban poverty, self-employment of urban poor must be encouraged by an appropriate credit support programme supervised by an Urban Small Business Development Bank. The Commission has recommended further that four lakh urban youths should be selected from poor urban households every year and trained in various skills so that they can get gainful employment.

Housing policy

The Commission has recommended that the housing policy must aim at increasings the supply of serviced land and low-cost shelter, improving and upgrading slums and conserving the existing housing stock. Apart from providing access to land, the housing programme must also provide for finance, infrastructure development, and community facilities. Public agencies in the housing sector should be restructured for fulfilment of their new role as facilitators rather than builders of housing.

Developed land

The Commission accords high priority to the supply of developed land in the urbanisation process. State intervention in the urban land market is imperative for ensuring equitable access to land for the urban poor and to recycle existing land efficiently. It is felt that the Urban Land (Ceiling and Regulation) Act, 1976 has failed not only to transfer significant amount of vacant land to State agencies, but has led to an unwarranted

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Developing North-Eastern Region thro' banking

A.R. Patel

Many factors particularly lack of transport, communication, water and power have impeded the growth of banking industry in the North Eastern Region. The author advocates for the creation of intermediaries like Land Development Corporation, Horticulture and plantation Development Corporation, Irrigation Development Corporation etc. to ensure better flow of credit facilities. This coupled with a suitable administrative and personnel policy will ensure the expected development of the region.

THE NORTH-EASTERN REGION (NER) HAS A total geographical area of about 25.50 million hectares and it accounts for 7.7% of total land area in the country. Over 90% of the population lives in rural areas and derives its levelihood from agriculture. The region is characterised by heavy rainfall coupled with humidity. The wide variation in the altitude and climate offers tremendous scope for growing different types of crops such as cereals, fibres, fruits, vegetables, spices, tubers, medicinal plants, forests for fuel, fodder and timbers, plantation crops and the like. While forestry, horticulture and agriculture can flourish very well in the region, animal husbandry alongwith rural and cottage industries can also find prominent place in the economy.

Banks have a crucial role

The Planning Commission has stepped up the financial outlay for the North Eastern Region (NER) in the Seventh Five Year Plan to Rs. 5145 crores, from Rs. 1020 crores in the Fifth Five Year Plan and Rs. 3093 crores in the Sixth Plan. While this has been a right step in a right direction, the role of the banking system is also of very crucial significance for bringing about the socio-economic development of this region and reduce the inter-regional imbalances in respect of the development process. Despite the fact that banks have been endeavouring their best, the credit-deposit ratio in this region is 45% as against the national average of 66%. Besides, there was a very large gap between the assistance sanctioned by the NABARD in this region and its actual utilisation, in as much as an amount of Rs. 83 crores out of the sanctioned assistance was yet to be utilised. The banking facilities already created in the region could play their role effectively if we appreciate the basic problems of the region such as those relating to development of agriculture.

NER's Problems

Problems concerning agriculture are of the type such as predominance of shifting cultivation. Besides, the loss of soil through erosion is the most serious effect of shifting cultivation. According to study (1981) soil-loss of the order of 181.6 million tonnes and loss of nutrients in the form of organic carbon, available phospherous and potash is estimated to be 6.03 lakh tonnes, 97 tonnes and 5690 tonnes respectively. Undulating topography and hilly terrains cause great variation in the altitude which creates problems of agricultural development. The soil in the entire region is acidic in nature ranging in PH from 4.5 to 6.5 which leads to low availability of phospherous and consequently low response to applied fertilizer. The heavy rainfall and humidity are conducive for the infestation of pests, diseases and weeds. Low temperature prevailing during the major part of winter season shortens the total period of time available for crop production rendering it difficult to practice double or multiple cropping. Other problems relate to lack of irrigation facilities, inadequate technology and extension support, lack of marketing, transport, and communication facilities. Land ownership pattern is one such formidable problem of this region. Community ownership of land prevails in this area. In some cases, the land is owned by the village head. The different land ownership patterns of the region act as counter productive in the development of agriculture. Absence of individual ownership with proper land records has also acted against the land development programme on a sustained basis.

While the agro-climatic conditions in the region and the socio-economic systems prevailing among the tribal communities in the hills of this region are quite different from that what is found elsewhere in the country, lack of bare minimum required infrastructure to support the development programme has proved to be the main bottleneck in the process of economic development of this region through provision of credit. Vast stretches of land and ranges of thickly vegetated forests present potential for development, but absence of roads and water has rendered/been rendering the scope unexploited/unexploitable.

The precarious difficulties relating to transport, communication, water and power have impeded the flow of credit because of the fact that (i) water and power act as catalyst for increasing the credit absorptive capacity of the area and (ii) transport and communication help both the bank officials as well as borrowers/ beneficiares to move and communicate; also facilitates supply of inputs and marketing of products. In absence of these facilities, it is difficult to conduct pre-investment survey, organise training programmes, conduct post-disbursal, supervision, and have monitoring-cum-current evaluation of the credit schemes and take follow-up action.

One of the most difficult problems experienced by banks in this region has been the absence of land ownership and that the land belongs to the community. This results into problems of identification of borrowers and consequent difficulties in post-disbursal follow-up and collecting repayment of loans. It is very difficult to convince the entire community to borrow for development and motivate them to conduct development activities for increasing production and productivity of resources-land, labour, livestock, forest etc.-and ultimately increase income. In this process, it is extremely difficult to sanction group loans either for production or investment-purpose and organise supply of inputs and marketing of the produce. Besides, area belonging to a community of tribals calls for larger investment which has to be sanctioned to the community of tribals and not to individual tribal. This therefore, calls for suitable amendment of the existing land laws so that community is enabled to borrow and develop the land and produce more and more. Organising the community of tribals into a formal or non-formal cooperative society for this purpose is one such alternative, But how far and how to make it operationally feasible and effective, is yet another question to be answered.

Need for intermediaries

In view of the difficulties experienced by the banks in expanding their branch network in remote places and providing post-disbursal supervision and guidance as well as other services to individual borrowers directly, it should be considered necessary that Govt. Should set up Land Development Corporations, Irrigation Development Corporations, Horticultural and Plantation Crops Corporations as inevitable intermediaries through which banks can provide credit for such investment in land, irrigation, and horticultural/plantation crop's development. The role of these Corporations should be more broad-based to obtain credit and convert credit into supplies and services. In short, these Corporations, with the help of Agricultural Finance Corporation of India, should formulate agricultural credit projects and banks' credit should be integrated with the supply of inputs, marketing and technical guidance. Thus, these Corporations will at the first instance assume the role of building the much needed infrastructure for supporting and sustaining agricultural development. These Corporations will have not only to build up effective coordination with the State level and district level officials of the Govt. and banks but also will have to initate actions and make other agencies feel their presence for doing something expected of it.

Bank's problems

Banks are also experiencing in this region the problem of placement of trained and rural-oriented officials who have sufficient acclamatization and are willing to work in the region. Besides, there are organisational constraints in meeting the credit needs and guiding the large number of populace spread over the whole region with such difficult geographical terrains.

The prevailing urban-oriented and sophisticated banking practices/procedures are not conducive to the promotion of development banking in this region. The cost-structure of investment programmes and viability of investment within the existing framework of norms stipulated by Banks and NABARD followed elsewhere, in the country are not finding favour either of the rural families or of the area.

Not only lack of co-ordination between banks and Govt. officials is the important impediment in the flow of credit but lack of co-ordination interse banks as well as Government departments also has proved to be the factors for not evolving a location specific shemes best suited to the area and accepted by the beneficiaries.

Suggestions

The operational efficiency of the existing branches should be improved through a series of measures viz., (i) proper selection of bank officials who have flair for extension work and who have worked in similar situation and shown results is a must. These officials who are willing to work in this region and show results should be provided special facilities and incentives. Rigid manpower policy will not work. In the development process, innovations in the administration and personnel management should become an integral part. In fact, it is a challenge to the Indian Administration and Professional Managers to find a suitable administrative and personnel policy which can work in this region. Almighty-nature has not created this region to remain unexplored and unexploited when science has been probing into the sea-bed, South Antarctica and outerspace. It is possible to develop this region of vast unexploited wealth and rich resources and one must mobilise 'Will' to do it. The officials should be

intensively trained and properly briefed of their role as 'development banker'. Their personal problems should also be identified and solved It cannot be one way traffic. Practical Manual should be provided to help them refer while dealing with different situations. In fact, a matrix between the banks' field officials and Govt. extension officials should be established and both should work in perfect harmony. Govt. should introduce 'Training and Visit' system and Banks should introduce 'Credit Delivery System' in this region. While Govt. should permit banks to specially recruit staff needed for this area, the banks should not feel it an expenditure, but they should realise that it is investment that can give better results in other terms (may not yield absolute profit to banks) viz., increase in productivity of rural resources. From the controlling office level, there should be continuous monitoring, follow-up and supervision over the branches and bank officials in order to guide the branches and provide right type of direction which can yield expected results. Today, this vitally important aspect is totally neglected. Besides; such steps which appear to be a radical departure from the conventional and traditional conservative banking, should be considered for implementation, viz. (i) the loans should be granted at 10% rate of interest by banks and all loans including consumption, production, housing, investment etc. should be refinanced by NABARD to banks so that banks have a margin of 6%. The refinance should be provided at 90% and 75% in the successive block of two years (ii) the repayment period should be based on the generation of income, borrowers' needs for minimum requirement of food, clothing, medical/ educational expenses and which could be set apart for repayment of loan. The repayment period may be extended upto 10 to 15 years (iii) RBI should liberalise CRR and SLR on the deposits mobilised from this region which should be only 3% plus 25% for first five years and then to be raised to 5% and 30% in the successive five years (iv) the credit-deposit ratio for each bank in this region should not be less than 60% in the first year, 70% in the second year and 75% thereafter (v) while the recovery of the loan should be the total responsibility of the Govt., the funds for rescheduling of loans in the event of genuine default should be released 100% by the NABARD so that provision of fresh credit may not be held up (vi) All assets created by the borrowers should be verified both by the Bank officials and Govt. officials and assets should be insured by the subsidiaries of the General Insurance Corporation at a nominal premium, (vii) while only one page proposal form should be designed along with one sheet for appraisal and sanction of loan, the security document should also be made the most simple preferably of one page. The simplicity of legality should be based on the considerations that the borrower is the Indian born national/citizen, borrowing for productivity purposes under Govt. and Bank's programme and from public sector banks which have been authorised by the Govt. to do so. The security document shall be automatically binding to all legal heirs in the event of death of the borrower and it will have the provision of automatic rescheduling of loan repayment period in the event of circumstances so warranting (viii) Educated rural youth should be appointed as agents to collect deposits, repayments, verify assets and enroll new borrowers on a reasonable commission by the Banks as is prevalent in case of Insurance Companies, LIC, UTI, small savings organisations etc. (ix) subsidy 25% on each investment loan should be kept as deposit with the bank which should be settled as the last instalment of loan and interest (x), Industrial houses/companies willing to work with banks in this region should be extended tax benefits and their role should be crystalised; (xi) Research, extension and education at ICAR, CSIR, CAPART laboratories should be integrated with each other, (xiii) Extension staff in Govt. Departments and banks should be adequately provided and trained; (xiv) one-borrower-one financing agency concept should be introduced (xv) house-hold survey should be done and Monitoring-cum-Identity Card should be issued with photograph and Ration Card to each borrower. ☐☐☐

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restrictions and determine the existence of a force in the developing countries to implement the economic, social and other changes. Such steps can prevent the outflow of skilled personnel and will help to keep these key resources for the national progress. The best research personnel should receive compensation enough to take care of their money problems so that they can concentrate on their work. The scientific community has a major role to play in developing India.

The law of uniform civil code of equal rights and equal opportunities for all citizens should be adopted as soon as possible in India. This code will control the brain drain of semiskilled and skilled personnel from India. The Government of India should form a statutory committee of the top executives of education and labour ministries to study brain drain. The Committee should submit its report annually showing measures taken for control of brain drain.

India is standing on the threshold of the 21st Century. The new generation will have to face new problems and challenges. Keeping this in view the Prime Minister Shri. Rajiv Gandhi, has formulated a new education policy which will soon be introduced in India. The nature of education will be such that it will meet the needs of local industry. India will have to see how trained manpower can be used best for bringing about changes. Mr. Rajiv Gandhi has said that training and education do not end when one leaves college. It is a continuing process. We must train and develop the brains in India to work all over India. At the same time we must see that we do not lose out on this and that adequate numbers who are working abroad, come back to India. It has been observed that there is a tremendous involvement in Indians abroad with India. They are longing to come back, we must not look at this as a loss. We must look at it not as Brain Drain but as Brain bank which is collecting interest and waiting for us to withdraw that amount and invest it again in India. ☐☐☐

Remote-sensing: potential impetus for economic growth

S.M. Rashid

Remote sensing is an extension of man's observation capabilities beyond the limited sensing performances of his visual powers. In this paper, the author explains and highlights the potential of remote-sensing in the economic development, its benefits in areas like meteorology, disaster warning, exploration of and monitoring of natural resources over and beneath the crest of the earth, etc. Moreover remote sensing is economically advantageous over the conventional methods of providing data base.

THE ECONOMIC DEVELOPMENT OF A NATION requires an adequate knowledge of the nature, extent, location and potential use of the resources and the ecological setting in which they occur. Equally important, in this context, is the presentation of the information about resources on the map to visualise their interrelationships for planning. Until recently resources inventories and necessary maps were prepared almost entirely from ground observations. Explorers travelled across the continents to unearth the hidden secrets of the nature and its habitats; archaeologists walked into the sandy deserts and rugged mountains to trace human past; geologists, foresters and agronomists studied rocks, trees and crops respectively at close hand in order to assess their ecoomic and commercial potential and surveyors walked the countryside with a view to preparing necessary maps. Although valuable information about the variety of phenomena was added, the inventories and maps compiled from different sources are generally found to have bias and inconsistencies and so they are not of much help to reflect the correct situation. Besides accuracy and consistency, these are almost questioned on the grounds of training and dedication of individual data collectors. Furthermore, the conventional methods have also been questioned on the basis of the extent of coverage of remote and inaccessible areas. For all such regions, the inventories and maps showed a highly generalised picture of widespread phenomena.

Extending perception

Remote sensing, a relatively recent innovation in the field of resources surveys, refers to the measurement of some property of an object by a recording device that is not in physical contact with the object. It is an extension of man's observation capabilities beyond the limited sensing performances of his visual powers. The principles that govern two sensing systems are same. However, the human eyes only respond to light in the minute visibel part of the electromagnetic spectrum, whereas, the artificial sensors react to the whole spectrum of radiations emitted, reflected, transmitted and absorbed by all materials at a temperature above 0 Kelvin (at *centigrade scale of temperature 0 Kelvin* equals to -273° centigrade). Clearly a natural sensing system becomes ineffective when need for more information accelerates. Table-1 presents an account of the observation capabilities of the two sensing systems.

Unlike conventional methods of ground survey, remote-sensing is inherently multidisciplinary as the pertinent electromagnetic radiations are attenuated by a variety of materials with which they interact. As such, a single remotely sensed imagery is the source of all information for geography, geology, meteorology, oceanography, geophysics, forestry, agriculture, and several other environmental and social sciences. Geologists, for example, can make use of it to find out

deposits of minerals and petroleum and to improve their understanding of the distributions of major geological structures; geographers can analyse land use patterns and explain the nature of spatial distributions, networks, movements, and interactions within regions of different sizes; foresters and agricultural scientists can determine the kinds of trees and plants, assess the health of forests and crops and estimate the harvests; engineers can plan large construction projects such as dams, highways and airports; surveyors and map makers can revise existing topographical maps as and when required and prepare new maps for accessible and inaccessible areas frequently; and, hydrologists can locate aquifers in the rocks and buried channels in the deserts and estimate volume of surface waters. In contrast, ground observations and surveys are commonly target-oriented. The target of observation is selected *a priori*, and as such they are called as specialised surveys.

Table 1

Observation capabilities of two sensing systems

	Characteristics Sensors	*Natural Sensors*	*Artificial*
1.	Ability to detect variations in environmental conditions	Limited performance	Broader and more selective
2	Capacity of recording	Temporary	Permanent
3.	Recall system to provide a comparison between patterns at different point in time	short term	Better
4.	Objective analysis of observations	Affected by the personal peculiarities of the observer	Unaffected
5	Response to energy bands	Poor	Best

Sensors for remote sensing

There are several kinds of equipments developed for remote-sensing. However, sensors operating to record electromagnetic radiations from ultraviolet to infrared and microwave regions show greatest potential for earth resources survey. They include aerial cameras, thermal infrared and multispectral scanners (MSS), sidelooking airborne radars (SLAR) and gamma ray spectrometer. Each of these sensors has its unique advantages and disadvantages. Whereas, aerial cameras, oldest and probably most widely used sensors, are characterised with a very high geometric fidelity and spatial resolution, the microwave sensors (radars) show unique capability of making measurement in any weather condition. The multispectral scanners, on the other hand, are known for their economical coverages of large areas at short and regular intervals at several independent wavebands.

The highest spatial resolution that a sensor can provide and sensitivity, the smallest change in reflectance which can be distinguished for the desired spatial resolution, are two most important requirements of a sensor. The resolution is the smallest target size on the Earth which can be discerned. It is determined on the basis of application for which the imagery is used. Whereas the spatial resolution of about 1 kilometer is taken as adequate for meteorological studies, most of applications in agriculture and urban planning require a high resolution of few tens of meters. The multispectral scanner (MSS) on board Landsat satellites provides useful imagery of 1:250,000 scale and smaller because of 80 meter nominal resolution of MSS. On the other hand, the high precision cameras of skylab type and MFK-6 multispectral camera on board Soyuz with resolving power of 10 meters can certainly provide imagery of sufficient scale of 1:50,000 and even larger. The Indian Remote Sensing Statellite (IRS-1A) Launched on 17.3.1988, when made operational, will provide resolution of 73 meters and 36 meters by Linear-imaging Self-scanning sensors LISS-1 and LISS II respectively. This will help in monitoring of most of the prevailing problems, like, floods, drought, desertification, deforestation, gullying, landslides, soil erosion, alkalinity etc. and the management of land and water resource in the country.

Assessing the cost

The serial camera has traditionally been the workhorse of the general remote sensing field. Now, it is recognised that large and medium scale resource aerial photography has become expensive. The cost is further increased to 2 to 3 times if black and white infrared, true colour and colour infrared photographic products are asked for. In circumstances where cost of low or high altitude aerial photography does not match with the economic return from the land surveyed, satellite sensing is rather economic means for mapping earth's surface and monitoring and planning for resources. It has been observed that the preparation of a small scale map of India through aerial photography would require about a year's time and an estimated number of 4 to 5 lakh photographs, whereas, the orbitting satellite could do the same job in 15 to 20 days with only 200 imageries; the cost would be between Rs. 2 to Rs. 10 lakh depending on the scale and kind of imagery, as against Rs. 20 to Rs. 50 crores for aerial pictures. However, this does not include the overall cost incurred on the development, operation, and maintenance of the remote sensing satellites which amounts to be around Rs. 200 crore for Indian Remote Sensing Satellite (IRS-IA). The cost is appreciably greater for a mapping statellite or a high resolution satellite. For example, the total expenditure incurred on French satellite SPOT is equivalent to Rs. 700 crores.

Benefits of remote sensing

The cost-benefit analysis of a given technology can be realised in the level of labour productivity attained. This implies an analysis of improvement in the efficiency of production of a desired quality by using a specific technology. Benefits also include the

overall impact of that technology on the scientific and technological development as well as in creating scientific attitude in the society. The production efficiency can be analysed with respect to quality of goods and cost incurred. The questions of quality and cost have already been dealt with. It has been noted that the information flow from remote sensors over the scale of accuracy and time is quite high. However, monetary values of overall benefits from the use of remotely sensed data are difficult to assess as present developments concerned with earth observations from resource satellites are still in experimental stage.

There are not very comprehensive analyses of benefits obtained from the use of remotely sensed information. Some preliminary assessments have, however, been made by considering various uses in the exploration and monitoring of resources and disaster warning and relief. These considerations would help to understand the potential of remote sensing. An example includes the Brazilian project of mapping 'Radam' (for project Radar Amazon) which made available very valuable information about the renewable and non-renewable resources of Amazon Basin. With an expenditure of about Rs. 60 million, the Radam discovered more than 400 new species of trees with an estimated value of about Rs. 1000,000 million of standing crops of trees. In addition, it also discovered a major new tributary of the Amazon, about 400 kilometers in length, and geological structures with rich deposits of bauxite, iron ore, tin and other minerals. Furthermore, it provided useful information which proved helpful in locating correctly many mountain ranges and soil and forest types on the maps; and in correcting the direction of flow of many tributaries of Amazon upto 90° So valuable are the findings of Radam that the whole geography of Amazon Basin is being recast.

It is estimated that floods, droughts, fires, insects, and disease damage about 200,000 to 300,000 million rupees worth of crops every year in United States alone. Similarly, two to three million hectares of forests are destroyed by fire annually in that country and the World losses average to some 80 million hectares. Obviously, some of these losses can be secured by early detection and remedial measures. Estimates have been made that the United States saved amount equivalent to more than Rs. 200 million in timber and Rs. 22.5 million in fire-fighting cost since 1965 by using infrared mapping and detection of forests by using infrared mapping and detection of forest fires.

The potential benefits of aerial imaging technology are also being explored and exploited in India. The National Remote Sensing Agency (NRSA), Survey of India (SOI), National Atlas and Thematic Mapping Organisation (NATMO) Geological Survey of India (GSI) and National Natural Resources Management System (NNRMS) and a number of other Research and Development (R & D) organisations and user departments are making use of the available data from Landsat Series of Satellites and French Satellite SPOT. Although, there is no readily available estimates of savings and gains in monetary terms obtained in India, repetitive flow of data and its use has given new directions to the planning and monitoring of fast depleting resources.

Further, satellite sensing makes such studies feasible which would not otherwise be economical. The world is suffering from protein deficiency and resort is made to fish in ocean for which information is lacking and the conventional means are inadequate to make forecast in time and at a reasonable cost. But a satellite with the capacity of measuring ocean temperatures could satisfy a prediction of the needs of fish forecasters that would require a million ships for comparable coverage in time and area.

A relatively more recent study by NASA has made an indepth investigation into the cost-benefits of remote sensing. Its estimates of savings and potential annual benefits form an operational earth resources satellite system range between Rs. 5560 million to 13,680 million and Rs. 246,000 million respectively for the whole world. The United Nations Committee of 37 nations met in Geneva in 1977 and discussed the question of cooperative funding between the nations. It evisaged a world system giving global coverage every 3 or 4 days costing about Rs. 1,000 million per year to operate, but yielding world benefits of many hundreds of billion rupees every year.

In addition to monetary gains, atleast two other benefits with respect to the development of scientific attitude and improvement of labour can be recounted. First, the direct psychological benefit of involvement in modern science and technology which leads to long term planning and development of essential cadre of scientists and technologists. Secondly, the indirect benefit that results from the specialised training of personnel who may become desirable for other segments of the economy, thereby bringing about intersectoral as well as international transfer of technology.

Data-base

The foregoing discussion leads to conclusion that there are a number of positive attributes of remote sensing which make it economically advantageous over the conventional methods of providing data base. First, wide-area coverage may be obtained inexpensively. Second, unbiased documentation of the most types of activity on or near the surface of the earth may be gathered. Third, short and regular periodicity in environmental data gathering is maintained. Lastly, it provides greatest amount of accuracy and reliability.

These attributes, if compared, can never be the characteristic of any other source of data gathering. The magnitude of errors in course and length of Amazon as revealed by Radam establish that the remote sensing is far more accurate and reliable. Evidently, the remote sensing with its observation and recording capabilities ranging widely remains the only soluble answer for most of the economically under-developed countries too. ☐

National grid for natural gas

Bhushan Marwah

Flaring of natural gas is highest in the North-Eastern region, primarily because of low and delayed off-take by consumers. The author here lists several steps that are being taken by the Government to make optimum use of the gas. Speedly measures are afoot to instal more compression facilities besides using the gas for power generation. A national gas grid is also envisaged for long-term availability of gas in different parts of the country.

WITH NATURAL GAS FAST EMERGING as a viable alternative to oil, the Central Government has drawn up a strategy to reduce its waste in flaring and to utilise it to the maximum. According to the Petroleum Ministry, such wastage has already come down from 42 per cent four years ago to 30 per cent last year. Its utilisation, which stood at 63 per cent, has also increased to 76 per cent currently.

Flaring, unwise

Flaring of natural gas occurs when consumers do not lift its committed quantity. it is also due to mismatch between production and compression facility in Bombay offshore region. To minimise flaring, a plan has been drawn to augment compression facilities. Besides, other consumers are being encouraged to take gas when regular consumers do not do so at a 15 per cent discount on the basic price. Such users are called fallback consumers.

Need for grid

Feasibility of an integrated gas grid to link Oil and Natural Gas Commission and Oil India Limited gas fields in Assam to make for flexibility in supply is being studied. A report on this has also been prepared by the Gas Authority of India Limited.

The country's gas reserve has been steadily rising during the past few years. The recoverable reserves, for example, have gone up by about one third in six years, from 410 billion cubic metres in 1981 to 540 billion cubic metres last year. These are concentrated mainly in three pockets—Bombay offshore, Gujarat and Assam.

At present flaring of natural gas is highest in the North-Eastern region, about half, whereas in the Western region it is little more than a quarter. In Assam, production has increased slightly from 5.6 million cubic metres in 1984-85 to 5.9 million cubic metres last year but flaring has been reduced from about half to one third.

Low off-take

In Assam, gas is being flared primarily because of low and delayed off-take by consumers. To overcome this, additional commitments have been made beyond the level of production and one million cubic metre of gas is being supplied to Kathelguri power plant. An OIL analysis indicates that 90 per cent of the gas flaring in this region is due to low off-take by consumers. Only 10 per cent flare is because of OIL's inability to supply gas at the required pressure. Consumers have, therefore, been requested to lift gas in an even manner, within the prescribed rates, so that wide fluctuations in off take can be avoided.

In the Western region, the flaring in off-shore gas basins has been much reduced during the last four years from 43 per cent four years ago to 29 per cent last year in the off-shore. In onshore, however, flaring has increased from 11 per cent in 1984-85 to 26 per cent last year.

Increased production of associated gas has, however, caused a temporary mismatch between production and compression facilities in this region.

Speedy compression, essential

Measures are afoot to instal more compression facilities. The Bombay High field has also been linked to the South basin Hazira pipeline to supply gas from these fields to consumers at Hazira and along the Hazira Bijapur Jagdishpur pipeline. When these consumers are added flaring in this region will also further go down.

It is significant that flaring of gas has slightly risen in Gujarat during the past few years. This is also due to failure of consumers to lift their committed off-take as well as to flaring of some low-pressure gas in isolated fields.

With increase in gas availability from Gandhar fields, an additional 1.5 million cubic metres is likely to be committed for power projects in Gujarat. Besides, a commitment of about 0.65 million cubic metres has

(Contd. on page 27)

Beware of passive smoking

G.S. Bisht

The author here makes an alarming revelation to non-smokers that they are equally prone to ailments associated with smoking as they have to inhale smoke exhaled by smokers. Hence there is an urgent need for legislation banning smoking at public places. Apart from this, the author feels, people themselves should take initiative in checking the menace of passive smoking.

DO YOU SMOKE CIGARETTES? Perhaps, you don't. You are well aware of the hazards of smoking. But what about the fumes you inhale when your friends or other people smoke in your presence.
You too become a passive smoker!

Passive smoking-the involuntary inhaling of fumes let off by smokers is equally harmful to nonsmokers. Studies conducted in the United States, Great Britain, Japan and other countries during the last two decades have proved that tobacco smoke can cause lung cancer, bronchitis, heart troubles and other diseases to the smokers as well as those who involuntarily inhale the cigarette smoke.

Take the case of Gun Palm. She worked in an office in Stockholm. She was a non-smoker. Her husband never smoked in her presence. Yet she developed "lung cancer of a type which exclusively occurs among heavy smokers." Her colleagues in the office smoked cigarettes. She had to inhale the polluted air.

Women more vulnerable

Gun Palm died in 1982—a victim of passive smoking. Sweden's Insurance Court of Appeal has recently awarded compensation to her family. Passive smoking is "sufficient to induce biological effects in terms of impaired lung function", said Dr. Lars M. Ramstrom, Director of Weden's National Smoking and Health Association, giving testimony in the above case.

Tobacco smoke contains nearly 6000 different chemical substances including nicotine, tar, carbon monoxide and nitrogen oxide, to name only a few. While nicotine and carbon monoxide are deadly poisons, tar is long known as a carcinogen—the substance that produces cancer.

In the United States and many Western countries cigarette manufacturers are required by law to state the amount of nicotine, tar and carbon monoxide present in each cigarette on the packet. Cigarettes with a tar content of more than 20 milligrams cannot be sold. In India cigarettes sold have a much higher degree of these substances.

This does not mean that cigarettes with low tar and low nicotine content are harmless They are only less harmful.

All of these chemical substances are not absorbed by the smoker and are inhaled by non-smokers endangering their health. Bidi is two to three times more harmful than cigarette, reports W H O

Women are more sensitive to tabacco smoke than men. At international symposium on the subject of passive smoking held in 1984 in Vienna (Austria), Dr. T. Hirayama of the National Cancer Research Institute, Tokyo, disclosed that having examined 91,540 Japanese women who did not smoke but were married to smokers, he concluded that the chances of these women getting lung cancer were much higher than those whose husbands did not smoke.

Dr. C. Everett Koop, the Surgeon General of United States in his 1983 report says that passive smoking poses a health problem to non-smokers especially children. Children are more susceptible to respiratory diseases caused by tobacco smoke.

"Involuntary exposure to cigarette smoke caused more lung cancer deaths than any other pollutant", according to a recent paper published by World Watch Institute, Washington-D.C.

[illegible]

[illegible] all possible steps to protect the non-smokers.

Many countries have already [illegible] legislations. For example, the [illegible] Clean Indoor Air Act prohibits smoking in public places and [illegible]. Other States in the USA have enforced similar laws. The Malaysian Government has banned smoking in Government offices and public transport. The Government of Singapore has launched a [illegible] anti-smoking campaign. Heavy fine is imposed on those found smoking at public places.

But in our country, people smoke in bus, train, office and other public places without any regard for non-smokers. "NO SMOKING" signs, if any, are simply ignored. Women and children suffer most. People generally do not object to, and tolerate it as a nuisance. Thus every man, woman and child becomes practically a passive smoker.

What is required

Total ban on tobacco, however desirable, may not be practicable for economic reasons. Tobacco is a good source of Government revenue. It also gives employment to thousands of people. But in the long run the Government may have to spend more money on providing facilities for the treatment of diseases related to smoking than it earns from the taxes levied on tobacco products.

The Government must at least take steps to safeguard the health of non-smokers. Smoking in public transport, Government offices and other public places should be prohibited effectively. Separate rooms may be assigned to non-smoking employees in Government offices. Cigarette advertisements which depict smoking as glamorous should be banned.

These advertisements generally associate smoking with a happy outdoor life or success in love and life. No wonder teenagers and youths are lured into smoking. Cigarette consumption in India has increased four times in the last few years.

It is time a campaign against smoking was launched by the Government as a part of public education. Voluntary organisations can be very helpful in this respect.

The statutory warning as printed on the cigarette packs: Cigarette Smoking is Injurious to Health is ineffective. It is either not read or simply ignored. Before long smoking may become a major health hazard in our country too.

Do's & Don'ts

(i) If you smoke, try to give it up or at least cut it off gradually.

(ii) Don't smoke in public places.

(iii) [illegible]

(iv) [illegible] if possible, [illegible] taking part in [illegible]

(v) While travelling by bus or train, politely ask the other person to put out that cigarette [illegible]. Don't think it a nuisance only.

It is your right to live in a smoke-free atmosphere. Don't let the human chimneys pollute it.

(Courtesy [illegible])

(Contd. from page 25)

been made, as a fallback, for sponge from [illegible] proposed methanol project in this Western State.

The [illegible]

It is hoped, as new consumers in Gujarat come up, the quantity of gas being flared will appreciably come down. In both Gujarat and Bombay, existing commitments match the present production and capacity of transporting it to the consumers.

Substantial reserves of natural gas have been lately found in Tripura. Production in this North-Eastern State will go up to at least three million cubic metres. Increase upto even seven million cubic metres is possible.

The Planning Commission has recently written to the Tripura Government, suggesting its various uses in gas based industries. It has also requested the State Government to indicate how more pointed action on using this increased production can be taken. Besides, it may even be possible to transport Tripura gas to Eastern India through Bangladesh.

Gas to generate power

In Tripura, natural gas has now been committed for power generation. About 0.13 million cubic metre is earmarked for operation of small power stations and an extra 0.75 million cubic metre has been committed for a 75 MW station, due to be set up by the State Government.

To ensure optimal utilisation of gas, the ONGC has prepared a preliminary report on a national gas grid, based on long-term availability of gas in different parts of the country. The report envisages construction of such a grid in three stages. The first stage envisages extension of the HBJ Pipeline to Punjab, Haryana and Delhi. The second proposes a southern grid upto Kerala, ultimately linking it with the northern grid. In the third and final stage the North-East and the Eastern Coastal regions are to be linked with the rest of the country.

(Courtesy [illegible])

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Welfare of the handicapped

This is a country paper presented by India at the 16th World Congress of Rehabilitation International, held in Japan from the 5th to 9th September, 1988. It surveys the extent of physical disability prevailing in the country, the steps taken to prevent it and the rehabilitation measures including education, training and employment of the handicapped, It also enlists the number of centres and institutes engaged in this effort in India and some other concessions that are available to the handicapped. What the Government of India is planning to do further in this sphere is also briefly highlighted at the end.

GLOBAL ESTIMATES HAVE INDICATED that nearly 10% of the population suffers from one or more of the disabilities—mental, physical, hearing and visual. The figures of incidence and prevalence however depend on the definition of disabilities. In order to ensure that the meagre resources for rehabilitation and assistance reach the more needy among the handicapped population in India, stricter definitions of disabilities and handicapped have been adopted. In the context of our definitions approximately 3.5% of the population suffers from one or more disabilities. A National Sample Survey was carried out in 1981, the International Year of the Disabled Persons. This survey covered three types of disabilities; visual disabilities, communication disabilities and locomotor disabilities. Mental disability was specifically excluded from the survey. In respect of communication disability, children in the age group of zero to four years were also excluded.

The survey arrived at an estimate of 12 million person having at least one or the other disability, which constituted about 1.8% of the total population of 680 million (1981 census). About 10% of these suffered from more than one physical disability. Considering each type of disability separately, those having locomotor disabilities constituted the maximum number (5.43 million), followed by those with visual disabilities (3.43 million), hearing disabilities (3.02 million) and speech disabilities (1.75 million). The distribution of the total disability, by types of disability and its rural, urban and sex-wise break-up is given in the following table·

Table A

Number of persons: Disabled (in lakhs)
(Figures in bracket represent percentages)

Type of disability	Total	Rural	Urban	Male	Female
Locomotor	54.27	43 42	10.85	34 93	19.34
Visual	34 74				
		(80.00)	(20.00)	(64.36)	(35.86)
Visual	34.74	29.08	5.66	14.42	20.32
		(83 71)	(16.29)	(1.51)	(58.49)
Hearing	30.19	24 77	5.42	16.54	13.65
		(82.05)	(17.95)	(54.79)	(45.21)
Speech	17.54	13.66	3.88	11.25	6.29
		(77.88)	(22.12)	(64.79)	(45.21)
Physical (At least one of the above)	119.39	96.72	22.67	67.96	52.43
		(81 01)	(18.99)	(56.92)	(43.08)

The prevalance of disability is naturally more in rural areas, where the bulk of the population (81%), live, than in the urban areas (19%). It is interesting to note that the prevalence is more among males (57%) than among females (43%). Only for visual disabilities is the prevalence higher among females (58%) than among males (42%).

The survey also came up with separate prevalent rates in respect of congenital cases (disability since birth) for visual and communication disabilities. In respect of visual disability they constitute 5% and 8% respectively in the rural and urban areas, whereas in the case of hearing disability they constitute 30% in rural and 28% in urban areas. For speech disability, the corresponding proportion is 77% and 67% in the rural and urban areas. The prevalence of congenital cases was seen to be less for all types of disabilities for females as compared to males, except the speech disability.

On analysis of the figures obtained during the survey it has been found that there is lower incidence of blindness in the younger age group than is generally believed. Also the percentage of persons with speech disorder in the educable age group (5-14) is very high (more than 4%). Of all the disabled population in the age group 15-59 who are in need of work those with locomotor and speech disability constitute 43% each and those with visual disability 14%. Of those in the age group 60 plus the visually handicapped constitute 50%

those with speech and hearing disorder 26% and those with locomotor disability 24%.

Though no comprehensive survey in respect of mental retardation has been conducted, it is estimated that about 2% of the population suffers mental handicap.

Prevention of disabilities

At present, the Central Government (Ministry of Health) conducts and coordinates a number of programmes for the prevention of disabilities throughout the country. These include tetanus immunisation for expectant mothers, DPT (Diphtheria Toxoid) immunisation for children, prophylaxis against nutritional anaemia and blindness due to vitamin A deficiency, and vaccination against polio and typhoid. Further, there exist national programmes for the prevention and control of blindness along with programmes for nutritional supplements, and progammes to educate Indian masses in appropriate health and nutritional practices.

Physical rehabilitation

The Central and the State Governements provide financial aid to voluntary organisations to buy orthotic and prosthetic aids, hearing aids and other aids and appliances required by the orthopaedically handicapped, hearing handicapped and blind persons. These aids are given free or at a subsidised rate according to the income of the handicapped persons or their parents, through identified centres, throughout the country. More than 1, 50,000 handicapped persons have benefited under this scheme. Annually, about 30,000 handicapped persons are given aids and appliances. either free of cost or at subsidised rates.

In the public sector the Central Government has set up a major undertaking, the Artificial Limbs Manufacturing Corporation, Kanpur, to manufacture, on a mass scale, standard quality aids and appliances required by the orthopaedically handicapped population. This happens to be the only manufacturing organisation of its kind producing orthotic, prosthetic and rehabilitation aids in the South sub-continent. In addition there are some manufacturing units in voluntary sector producing aids and appliances for orthopaedically handicapped and hearing handicapped. The National Institute for Visually Handicapped has developed a large number of aids including low-cost aids for the blind. Some voluntary organisations, too, have developed aids for the blind. 150 different kinds of aids and appliances are manufactured in the private and public sectors in the country.

Education

A scheme was launched in 1974 for promoting integration of handicapped children in regular schools alongwith normal children with a view to promoting the acceptance of the handicapped children by the community and to enable the community to appreciate the potentialities and difficulties of the handicapped children. The Central Government gives cent percent assistance to State Governments to implement this programme. Under this programme, special educational aids, equipment and stationery are given to the handicapped students. To attract teachers for taking up education of the handicapped in the normal school system, incentives are given in the form of special pay for such teachers. Under this programme about 1,000 schools all over the country with about 10,000 children have been covered. Integrated education has been accepted as a policy for education of the handicapped except for those, who by reasons of severity of their handicap, cannot cope with the integrated set up.

To attract the handicapped students and to assist them in securing education, scholarships are given by the Government. Education is free from class I to class VIII in all Government run institutions for the handicapped. The State Governments provide scholarships to handicapped students from class 1 to class VIII to enable them to meet the cost of special aids and equipment. The Central Government provides scholarships to handicapped students from class IX onwards. Scholarships/stipends are avilable for pursuing academic/technical education, professional training, correspondence courses of study and on-the-job training. Blind students are given reader's allowances at different rates depending upon the class in which the blind person is studying. Transport allowance is given to orthopaedically handicapped and an allowance for maintenance/upkeep of aids and appliances is also given to the orthopaedically handicapped. About 30,000 students get scholarships from Central Government every year.

Assistance is given to voluntary organisations for setting up schools/institutions for providing special education and vocational training to disabled persons. Under the scheme, 90% cost of the project is met by Central Government with 10% contribution by the voluntary organisations. Similar schemes are also operated by various State Governments. Under the scheme of the Central Government. about 200 voluntary organisations are assisted every year. It is estimated that another 200 organisations are assisted by the State Governments from their own resources.

Training and employment

To prepare a handicapped person for taking up various opportunities, both in wage-paid employment and self-employment, handicapped persons are given training in various vocational activities with emphasis on developing their skills. Training facilities are avilable both in the Government and voluntary sector. Training facilities in voluntary sector have been developed through liberal assistance from the Central and the State Governments. About 100 training institutions out of which about 50 are in the Government sector, exist for providing training in a variety of vocational activities to the handicapped persons.

16 Vocational Rehabilitation Centres have been set up to promote training and employment of the handicapped. These centres assess the vocational and

psychological needs of the handicapped persons, arrange for their training either in industries or in regular training centres and assist them in rehabilitation either by providing them regular placement or helping them in getting loans from banks for setting up small production or service units.

A multi pronged approach is adopted for the training and employment of the disabled in the country. The important programmes to promote their employment are:

(i) Reservation of jobs in the public sector;
(ii) Special Employment Exchanges and special cells in the employment exchanges to promote placement of the disabled in jobs;
(iii) Vocational Rehabilitation Centres to arrange for assessment, training and placement.
(iv) The scheme of assistance to voluntary organisations for training and employment of disabled persons.

Since 1977 the Central Government has reserved 3% of vacancies in group 'C' and 'D' posts in the government and public sector undertakings for the disabled. Posts which the disabled can handle without loss of efficiency or productivity or without being hazardous have been identified so that appointing authorities have no difficulty in offering them such suitable assignments. Similar reservations ranging from 2% to 4% have been made by State Government and Union Territories. Relaxation in age by 10 years and relaxation in medical standards have been made to enable them to take advantage of the reservation policy.

22 Special Employment Exchanges and 40 cells in regular employment exchanges have been set up to register physically handicapped persons seeking jobs and to arrange for their placements in public and private sectors. About 50,000 handicapped persons have got employment so far through the efforts of special employment exchanges, special cells for the handicapped and normal employment exchanges.

Apex centres

There are four National Institutes in each major area of disability, under the Ministry of Welfare. They are:

(i) National Institute for the Orthopaedically Handicapped, Calcutta;
(ii) National Institute for the Visually Handicapped, Dehra Dun;
(iii) National Institute for the Mentally Handicapped Secunderabad; and
(iv) Ali Yavar Jung National Institute for the Hearing Handicapped, Bombay.

These Institutes are designed to be apex organisations for training of professionals, production of education materials and other aids for the handicapped, conducting research in rehabilitation and development of suitable model services for the handicapped. These Institutes work in coordination with each other and other training centres in the country. leading voluntary organisations, State Governments as well as international agencies.

These Institutes also provide facility for assessment and therapeutic services, parental counselling and assistance in getting suitable placement for the handicapped.

To enforce standards in various institutions of the handicapped and standardisation of training programmes, an apex body known as Rehabilitation Council has been set up. This Council prescribes syllabus for various training programmes, recognises the training institutions and maintains rehabilitation registers.

Other concessions

Some special concessions for the handicapped individuals to enable their rehabilitation are as follows:

(i) Concessions for travelling in bus, rail and air;
(ii) Conveyance allowance at specified rates to handicapped persons working in Government/public sector;
(iii) Availability of petrol at subsidised rates to those handicapped persons who are engaged in self-employment or are working in private sector;
(iv) A certain percentage is reserved for allotment of petrol pumps/gas agencies/kerosene oil depots to physically handicapped persons;
(v) Public telephone booths are given to handicapped persons and a percentage of the earning at the booth is retained by the handicapped operator;
(vi) Age relaxation of 10 years for appointment to Government service;
(vii) Priority in allotment of houses to physically handicapped Government servants;
(viii) A certain percentage is earmarked for the handicapped in allotment of flats, and plots by various housing boards;
(ix) A certain percentage is earmarked for handicapped for the allotment of small shops, kiosks to enable the handicapped to set up self-employment activities;
(x) Loans are made available at nominal rate of interest to help the handicapped for setting up self-employment vendors.
(xi) Life Insurance Corporation of India has introduced Special Group Insurance Scheme under which parents/guardians of mentally handicapped children are assured regular funds for the maintenance of their wards after their death.

Rural Rehabilitation

Nearly 80% of the disabled reside in rural areas whereas the services in the government as well as non-government sectors are largely concentrated in urban areas. To meet with this situation, ten district rehabiliation centre projects have been started, on pilot basis, in ten districts in the country. The scheme envisages comprehensive identification in the area of operation, following which restorative, medical, educational, vocational and placement services are arranged for the disabled. The scheme envisages close

integration with the health and educational infrastructure already available at the field level and close interaction of the community in the rehabilitation process. The scheme is under evaluation after which it will be expanded to cover more areas.

Information and documentation

In order to provide timely and correct information to the disabled, their families and the professionals, Government of India has set up a National Information and Documentation Centre at New Delhi. The Centre is being computerised and will have total information about various aspects of disability and its management.

Role of UNICEF

Committed as it is to the development and welfare to children, UNICEF is working in partnership with the Government in programmes of childhood disability. The thrust of UNICEF supported activities is in the area of prevention of disability, production of materials for creation of awareness, training of teachers, community workers and parents, etc. and research in preventive, early detection and management of various forms of disabilities. UNICEF has funded 19 research projects covering wide range of subjects concerning various disabilities. Most of these projects are conducted through national apex centres set up by Government of India in all the four major areas of disabilities. UNICEF has also assisted eight district rehabilition centre projects which has been referred to in preceding paragraphs. About 30 voluntary organisations have been funded to carry out programmes related to childhood disability UNICEF is also funding national level seminars which provide forum for interaction of non-governmental organisations working in each area of disability with the Government institutions and functionaries.

For the period 1985 to 1989 UNICEF, as per Master Plan of operations, is committed to spend US$ 41,00,000 on programmes relating to childhood disability.

Perspective

In consonance with the objective of the Welfare State, notwithstanding the paucity of resources, the Government of India has accorded top priority to welfare of the weaker sections including the handicapped. Welfare of the handicapped has been included as an item in the 20 Point Programme which is an agenda of priority items for the Government.

Besides expanding the services quantitatively the Government of India is committed to strengthen the programmes by providing for a comprehensive legislation for the handicapped. A Committee set up by the Government of India to go into the scope of legislation has recently submitted its report. Such a legislation will go a long way in securing the long cherished needs of the disabled community to occupy their rightful place in society.

Technology can play a major role in making the life of the disabled easier and better. Towards this end Government of India proposes to set up a Technology Development Project which will coordinate the work of research institutions and centres of excellence in the area of science and technology which are already doing a lot of commendable work which can be usefully harnessed for the benefit of the handicapped population.

Government of India is also considering setting up a National Trust for the Mentally Retarded which would provide guardianship and rehabilitation services to the mentally handicapped children and can even inherit property on their behalf. Such a Trust, when set up, would go a long way in removing the anxieties of the parents who are often worried as to what would happen to their children after their death.

Non-governmental organisations and social groups will continue to play a significant and predominant role in welfare of the handicapped in consonance with India's democratic framework. ❏❏❏

Renewable energy sources for Andaman & Nicobar Islands

A 3.5 KW biomass based sterling engine demonstration power plant has been set up at Port Blair as part of efforts to meet the energy requirements of people living in the Andaman Island.

A team of experts led by Shri Maheshwar Dayal, Secretary, Department of Non-Conventional Energy Sources, which visited the Andaman & Nicobar Islands recently, has drawn up an action plan to be undertaken in the field of non-conventional energy sources for the Islands in the remaining two years of the Seventh Plan as well as medium term and perspective plans upto the turn of the century. An intensive programme will be taken up to introduce renewable energy devices like improved chulhas, solar cookers, biogas plants and fuel briquettes to meet cooking needs of the people. Solar, wind energy and biomass based system will be used for metting heating, drying and pumping needs

Electric power needs of the Andaman & Nicobar Islands, which are presently entirely diesel based, are sought to be met increasingly by the use of solar energy, wind energy and biomass based system using waste wood. ❏

Rs. 70 crore for Cooperative Projects

The National Cooperative Development Corporation (NCDC) will provide assistance of about Rs. 70 crores for 15 new cooperative projects.

The projects include asistance for setting up of Copra processing facilities in Kerala, a new scheme for development of oilseed growers cooperatives, assistance to seven sugar mills in Punjab and setting up of three integrated cooperative development projects in Assam, Karnataka and Tripura. Assistance will also be given for a dairy project in Andhra Pradesh, a spinning mill of 25,000 spindles in Karnataka and a rubberised coir unit in Tamil Nadu. ❏

BOOK REVIEW

Ecodynamics

Ecodynamics: A New Theory of Societal Evolution, by Kenneth E. Boulding, Sage Publications, Beverly Hills, U.S.A.; 1981 (Paperback edition), pp. 382, (Price not given).

Kenneth E. Boulding (1910) is well known among the economists of the world specially for his original and thought-provoking analysis. Keeping his own standard of achievement, Ecodynamics presents the theme of economic science from such an eclectic viewpoint that physical scientists, biologists, as well as other social scientists will all find something new for their assimilation. The very theme of the study is so extensive that students of many disciplines having relationship with life sciences will find many things of interest for them: it deals with the whole of the universe and, particularly, for that tiny part of it which constitutes the environment in time and space of the human race. The book is "an absurdly ambitious project, which is bound in some sense to be a failure", but his rendering of the theme has been so masterly that in presenting this monumnetal treatise he has excelled even Adam Smith and Alfred Marshall

The book is about evolution, the pattern that can be perceived in the structure of the universe in space and time. The biological and societal evolution presents what is existent in primitive form even in physical evolution, the basic pattern expressed as the process in which the *genotype* produces *phenotype* under which process the *know-how* being the essence of genetic structure, directs *energy* which transforms *materials* into improbable structures of phenotype. Know-how energy, and materials (KEM) are so important for the present approach to evolutionary impetus that Professor Boulding considers that the traditional taxonomy of the factors of production in terms of land, labour and capital (and even organisation) are resolvable in these three main constituents of the universal evolutionary process.

For the survival of any species it is necessary that there should be a *niche* for its growth and expansion. As long as there exists the *niche*, the species will grow, but, with mutation and other changes, the role of niche is finished and it no longer is present; the species will gradually become extinct. A special feature of societal growth is that the human beings have a brain which has immenser potential whose capacity is neither fully comprehended so far nor even utilised to any substantial level. Therefore it is capable of creating new niches for its operation even when the old ones are obsolete. The various human artefacts are classified in terms of things, organisations and people (TOP) in terms of which the innumerable outcome of the human operations ranging from the miniaturised transistor circuits to items bigger than whales and spacelabs are produced by humanbeings. The creativity of mankind is fathomless.

During the process of evolutionary growth, the societal evolution (as well as other life forms) pass through, though they are overlapping in several instances, the important stages or systems. They can be considered as the Threat System, the Exchange-Eonomy or the Economic System, and the Integrative System. Corresponding to each system there are certain power influences which enable sustenance of the relationship under any system. Money, monopolistic control and terms of trade are some of the forces which give power under the Economic System. Under the Integrative System, the power of love and antipathy, benevolence and malevolence become important.

Presently, due to joint production of exhaustion and pollution considerable ecological imbalance has occurred. The shortage of power and explosion of population have created unprecedented trouble for the mankind. Inequitable distribution of wealth has further accentuated the difficulties. There seems to be a limit of growth under the present conditions. The niches for human growth seem to have been filled. This is the crisis of the modern age.

But this is only the crisis of economic system. As the creativity of human mind is unpredictable, it is expected to be capable of evolving some new niches for its survival which could be greatly strengthened if the Integrative System is well nurtured and love between the nations is fostered. It will also require greater expansion of human knowledge, the noosphere whese by the mutation, creation of new artefacts and mobilisation of energy and transformation of material in required structure could be made possible.

The work is indeed so refreshing that while reading it one feels in deep rapport with the thinking process of the author which encampasses poetry, philosophy and religion. There is hardly any subject on the earth which he does not seem to have linked with the subject of his study, for, after all everything that exists is an important component of societal evolution. ☐

Ganga Murthy

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increase in land prices. The Commission feels that the Act be amended radically and supplemented by taxation measures to encourage owners to develop the land for housing for lower and middle income groups and bring a larger supply of land into market.

Rent control law

The Commission refers to the deleterious effects of existing Rent Control legislation and recommends that Rent Acts should be modified to limit tenancy protection to the poor and existing tenancies and to provide for annual revision of rents to reflect increases in the cost of living, the increases varying between residential and non-residential premises and houses above and below 80 square metres.

The Commission believes that India's architectural heritage is truly extraordinary and our towns and cities present unique characteristics worthy of preserving. The Commission therefore suggests that conservation should go beyond preservation of monuments and encompass the whole built heritage. Direct fiscal and other incentives should be offered as an encouragement to individuals to conserve places and sites.

Administrative set-up

For the efficient management of urban centres, the Commission has proposed a two-tier administrative set-up consisting of city corporation and local councils for cities with over 5 lakh population. The Commission suggests that the holding of elections for reconstituting a superseded local body within the specified period should be made mandatory and the municipal electoral process brought under the umbrella of the State Chief Electoral Officer. It has proposed steps to improve the financial and managerial capacity of local bodies, besides larger access to budgetary and institutional resources.

Need for Council

The Commission has also recommended that for the formulation of future urbanisation policies, there should be National Urbanisation Council at the national level with a counterpart State Urbanisation Council in each State. ❑❑❑

Soviet help for Power Projects

India proposes to set up a number of power projects with the Soviet assistance in the Eighth and Ninth Plan periods.

The Soviet Union will assist India in creating an additional capacity of 6000 MW in power sector in the country. Of this, 4500 MW will be in the Eighth Plan period and 1500 MW in 1995-2000 A.D. ❑

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Harnessing science & technology for faster development

Dr. B.D. Tilak

The article serves as a critique of the paper 'An Approach to a Perspective Plan for 2001 A.D.: Role of Science and Technology' recently published by the Science Advisory Council to the Prime Minister. It discusses many strategies for application of Science and Technology for faster national development. These include creation of National Science and Technology Commission (NSTC)which will mainly deal with the meaningful application of S&T for development in critical and priority areas; S&T in Planning and Planning for S&T. Discussing the role of S&T in national development the author feels that a nexus between industry, specially Public Sector Enterprises and national laboratories, will be useful. The article also suggests strategies and modus operandi for application of S&T.

The Science Advisory Council to Prime Minister (SAC-PM) has been charged with the responsibility of suggesting strategies for incorporating science and tchnology (S&T) in a perspective plan for the period upto 2001 A.D. These strategies have been outlined in the paper 'An Approach to a Perspective Plan for 2001 A.D : Role of Science and Technology' (referred to hereafter as the Approach Paper) which has been recently published by SAC-PM. The paper has been thrown open for a public debate. The present paper is a critique of the Approach Paper.

The SAC-PM is of the view that the reason for S&T not having played its due role in national development is largely because planning *for* S&T has not yet been integrated with planning for economic development. Without proper integration of S&T *into* planning, the Council feels that the country is unlikely to achieve its ambitious social and economic goals. The Council has therefore outlined its strategy for use of S&T in planning as also for planning of S&T *per se* in the *Approach Paper*

NSTC

The main instrument for implementation of these strategies proposed by the Council is the "national Science and Technology Commission (NSTC)" which is to be newly created. A similar attempt was however made earlier in 1972 through the establishment of the National Committee on Science and Technology (NCST). The scope of NSTC appears to be similar to the work of : (a) Member-S&T, Planning Commission and his Secretariat; (b) Science Advisory Council to P.M. (c) Department of Science and Technology (D.S.T.) (d) Former NCST. Coming down to specific S&T Sectors, NSTC's work will duplicate the work of specialized Government scientific agencies who also do S&T planning and implementation in their respective fields. Basic research is also actively encouraged through Science and Engineering Research Council (SERC) of DST which has also published a number of documents on "Thrust Areas" which are actively supported by DST and other R&D agencies.

What is the justification to hope that NSTC will succeed when all the above S&T institutional structures and former NCST have failed to deliver the goods as implied by SAC-PM? NSTC is expected to concern itself mainly with the following:—

(a) Meaningful application of S&T for development in critical and priority areas.
(a) S&T in planning and
(c) Planning for S&T.

All these functions are already performed by above S&T Agencies although not as efficiently as one would have liked. NSTC will suffer from lack of S&T infrastructural and administrative support enjoyed by S&T agencies. It will have to heavily depend on S&T expertise from S&T agencies in its work without the administrative work on NSTC Plans and projects and deliver goods in a finite time frame.

It seems prudent to look into the lacunae in the S&T Cell in the Planning Commission and the S&T agencies and their administrative structures and procedures. These lacunae should be removed and the existing S&T agencies and S&T Secreatariat in the Planning

Commission should be strengthened. Member (S&T) in Planning Commission and SAC-PM acting in concert could as well perform the function of the proposed NSTC. Similarly one should look into why Government Departments and economic ministries and State Governments have not collaborated with R&D agencies and institutions in effective application of S&T for development. Based on this study, corrective measures at the administrative and decision making levels of State and Central Governments should be initiated whereby S&T will become an integral part of economic planning, development and administrative action at the grass roots level. To be effective such initiatives will have to be taken by political leadership rather than NSTC.

Role of S&T in development.

Major reason for public apathy and lack of interest in bureaucracy and political leadership as regards the role of S&T in development is because scientists have kept themselves aloof from the development process and government programmes at the grass roots level. Majority of our scientists have also not shown-by their deeds-the importance of S&T for development. Lone exceptions are perhaps in the field of agriculture, atomic energy and space. In all other sectors we have depended heavily on imported know how (KH) for development. Another reason is the lack of serious political and administrative commitment to self reliance. Import of KH is not only freely permitted by Government but also encouraged. This has resulted in lack of demand for indegenous S&T for development. Government has really not comissioned Indian Scientists to carry out technological missions (except very recently), except in space, atomic energy (where foreign assistance is hard to come by) and agricultural sectors. In agriculture, by its very nature, we are perforce required to depend on our own scientists for development and solving domestic problems.

The Government and industries' preference for the soft option of importing KH is one of the prime reasons for the lack of contribution by Indian scientists to countries' development. Unless Government makes a firm and sincere commitment to self reliance *and actually acts on it*, setting up of yet another scientific infrastructure, such as NSTC, is hardly likely to make any material change in the present dismal situation regarding lack of application of S&T for development which has been repeatedly stressed in the Approach Paper.

It may be useful to recapitulate past attempts at establishing a nexus between industry, especially Public Sector Enterprises (PSE) and national laboratories. In this connection a reference may be made to the Report of the NCST Working Group on Research and Development in Public Sector Enterprises (December 1977) which had made recommendations regarding organization of R&D in Public Sector and establishment of institutional arrangements for establishment of close cooperation between national laboratories and PSEs. The recommendations of the Working Group, though valid even today, remain mostly unimplemented. So also the recommendations of NCST in respect of introduction of S&T in Planning and Government. It is not the lack of such studies on how S&T should develop in India or how they could be employed for development that S&T has played an ineffective role in development, but the lack of political will and committment on the part of Government administration, S&T Agencies, Industry and scientists themselves to act on these recommendations. Unless there is a sea change in this situation, setting up of NSTC and other institutional structures proposed in the Approach Paper are not likely to materially alter the dismal S&T scenario.

NCST which was constituted in 1972 did an excellent job in preparing a perspective 15-Year National Plan for S&T and suggested concrete action to implement the Plan. It was also suggested that the National S&T Plan should be updated every five years. However this was not done. Much of the present situation has arisen because of the unwillingness of S&T agencies, bureaucracy and industry to cooperate with NCST. There is no evidence to suggest that the attitude of these agencies to resist *outside* advice by agencies such as NCST (or the proposed NSTC) has changed even today. Unless there is compulsion and discipline enforced by political leadership, all initiatives, such as NSTC, are likely to prove infructous.

'Some Basic Issues' and Possible Scenario by 2001 A.D.' in the Approach Paper reiterate issues and positions which are well known. Indeed these sections are mostly in the nature of platitudes and pious hopes. The Central and State Governments are already aware of these issues and acting on them although one may find these actions not vigourous enough. But this is also becuase of their inherent complexity in the context of Indian situtation, lack of resources. societal constraints, countries' poverty and backwardness in almost all spheres. These problems cannot be simply wished away or done away with through formulation of plans by scientists who have no exposure or experience in action at grass roots level in various States. These constraints should be appreciated by scientists who should also be aware of their own serious limitations arising out of lack of knowledge of field conditions and experience

S&T in Planning

While stressing the importance of use of S&T in planning for economic development, the Approach Parer has not discussed as to why this has not happened inspite of an S&T secretariat in the Planning Commission. Similarly there is no analysis as regards the reason why there is no demand on S&T sector by user agencies and Government departments. An indepth study of these issues appears necessary. Some of the reasons for this are discussed earlier in the paper.

Most of the Section of 'S&T in Planning' in SAC-PM stress the obvious. Mere statements, such as 'S&T for providing basic needs' will not help much. Scientists

should co-relate their own R&D work with government action under the 20 Point Programme for removing poverty. Such effort should be coordinated with State Government efforts in this regard. Only through such specific goal oriented action research and field work Scientists will be able to assist in anti-poverty programmes and providing basic needs. Sections in the Approach Paper relating to efforts related to providing 'basic needs', economic growth and improving quality of life, mostly stress the obvious. It would be naive on the part of scientists to think that the Central and State Governments are unaware of the need for such effort. What is really needed is not merely listing of such programmes but *doing* something about them. This has not been done so far by most Indian scientists who are not tired of stressing on what *others* should be doing to meet basic needs rather than putting in effort themselves. Many of them are engaged in following 'frontier areas' which are irrelevant to needs of Indian society and current national priorities. Other motivating force for our scientists is industrial research which brings in personal rewards and benefits. These value systems are not related to national priorities or providing 'basic needs'. Unless these facts are duly recognised and Indian scientists, either on their own or under Governmental pressure, change their mental attitudes and value judgement, there is little possibility of our scientists making any worthwhile contribution to solving national problems and promoting development. One should, therefore, suggest ways and means for bringing about a change in mental attitudes rather than finding fault with others. Measures such as establishment of NSTC are unlikely to bring about much change in the present S&T scenario regarding utilisation of S&T for development. There is need for bringing about a fundamental change in Indian Scientists' work motivation which needs to be oriented towards national priorities and societal needs and perceptions. Such a change is most likely to be brought about by political leadership and it would be futile to leave it to scientists, entrenched as they are in their present work ethos, mental attitudes and value judgements.

S&T in industrial development

The Approach Paper, while stressing the obvious, has not dealt with the question as to why domestic S&T effort is not playing its expected role of increasing industrial productivity, efficiency, world competitiveness and quality of goods. The prime rasons for this malaise is Government's and Industries' preference for the soft option of importing technology and the protected Indian market. Under such circumstances, Indian climate is not very conducive to either promoting inhouse R&D research by industry or technology transfer from national laboratories to industry. Earlier attempts at establishing and effecting nexus between industry and national laboratories have been mostly infructuous becuase of lack of Governments and industries' *real* commitment to self reliance. Unless there is a sincere committment by Government to self reliance, there is little hope for indigenous R&D contributing materially to industrial development.

Planning for S&T

Whereas the Approach Paper describes the background for Planning for S&T adequately, the reasons for work of scientific agencies not being utilised for growth of national economy or improvement of productivity in various sectors and industry have not been adequately discussed. The lack of full participation by S&T agencies in economic development has been attributed to absence of well-planned mechanisms for integration of S&T with development planning. This contention is only partly valid since the Planning Commission has a full time Member for S&T with a backup secretariat. Further what prevented S&T agencies *on their own* to integrate their effort with development planning at the National and State levels ? The bitter truth is that no serious attempt has really been made by S&T agencies to co-relate their work with national priorities and Government effort at removing poverty and promoting development. This situation will change only through initiative and firm action by political leadership and not by S&T Agencies, scientists and bureaucracy. These parties have really not made any *serious* attempt so far at getting together in a spirit of mutual cooperation, respect for each others capabilities and service to the common man.

Whereas implementation of recommendations under the section dealing with higher education will lead to better quality of scientific education and research, it is necessary to emphasise the need to give a definite orientation to our educational process towards national problems and priorities in development. In the absence of this orientation our educational system will continue to produce skilled scientists who will be useful for the market in developed countries but not for our own countries' overall development. Whereas young scientists should be enabled to take advantage of the facilities and expertise in National R&D agencies and institutions, it is also important to give a national perspective to make them responsive to national and social needs. This perspective appears to be lacking in our scientific and educational institutions to which the Approach Paper has made no reference.

Modus operandi and implementation

Defining R&D tasks in terms of National Technology Missions and implementation of such tasks through such Missions appears useful. Optimised food production in areas suited to intensive agriculture appears rational but is likely to meet with resistance from State Governments who are presently not endowed with extensive irrigation facilities.

Most of the strategies for action and modus operandi described in the Approach Paper have already been elaborated earlier in the Planning Commission S&T and Environment Plan document for Seventh Five Year Plan. Some of these recommendations have also been implemented.

The Approach Paper recommends declaring "Population Control" as a Technological Mission. However this subject does not appear to be suitable for

tackling through the Technological Mission Mode. Spread of education and removal of poverty will play a crucial role in arresting Indian population to a sustainable level. Both these aspects are already being emphasised and acted upon by Central and State Governments although one might have hoped for more vigourous action.

The unsatisfactory progress in the eco-development action programmes pertaining to Himalayas, Western Ghats and the Ganga basin is not really because of inadequate university and college structures (as stated in the Approach Paper) but because students and academic faculty are really not much interested in doing field work along with voluntary agencies and local people.

The Approach Paper recommends setting up of a number of new S&T structures (Telecom Commission, Civil Aeronautics Board, National Advanced Materials Research and Development Board. Instruments Corporation, National Science and Technology Commission) Most of the work functions of the proposed new S&T institutional structures are already covered by existing agencies. It would be more prudent to remove lacunae, if any, in existing S&T agencies and institutions which should be strengthened rather than establish new S&T structures.

There is little new ground covered by the Section on Modus Operandi and Strategies for action, most of it is in the nature of platitudes.

Allocation of resources for S&T

The Approach Paper has recommended higher financial inputs in S&T amounting to 2-3% of GNP in the coming decades. If the present investment in S&T (2% in the Seventh Plan) has not led to desired results, as stated repeatedly in the Approach Paper, what is the justification to hope that even more financial inputs will bring in expected returns ? What is really needed is *not* additional financial inputs, but much stricter discipline in Government expenditure on S&T with the view to ensure adequate national and social returns in relation to investment. Indeed there has hardly been any evaluation of national and societal returns in relation to the inputs in S&T by Government. Only if such a study shows that the nation and our people are getting their money's worth, then only higher financial inputs for S&T should be considered.

S&T effort by states

The Approach Paper has rightly emphasised the need to activate the State Councils for Science and Technology as well as their departments of Science and Technology. It has also urged the States to allocate much greater resources for S&T activities. However the job of percolation of S&T down to local people is not only the responsibility of the States, as stated in the Approach Paper, but also that of the Centre which is the major source of S&T funding in the country. Many of the problems of regional development are not confined to the respective States only but have relevance to many other areas also. Regional development through the application of S&T is, therefore, not only the responsibility of the States but also that of the Centre which should allocate a sizeable share of its current S&T budget for developmental activities in the States.

To ensure that States play their rightful role in promotion of S&T and their utilization for development, much larger allocation for State level S&T effort is necessary *both* by the States as well as by the Centre. Prime Minister should write to all State Chief Ministers asking them to personally take active interest in S&T activities and the application of S&T for development. They may be also asked to report progress to the Centre as is being done in the case of 20 Point Programme. Since development of the country can only be ensured through full cooperation and participation by the States, much greater attention should be paid than hitherto to ensure State level S&T effort. Presently most Government R&D Agencies and Science Policy advisors are located in Delhi, whereas developmental activity takes place in the States. As a result there has been a mismatch between Central and State Government thinking and perceptions as regards role of S&T for development. It is therefore desirable that S&T planning for economic development gradually shifts from the Centre to all State capitals if S&T is to play an effective role in improving the economic condition and life style of 75% of Indian population which is located in rural countryside. Viewed from this perspective the disparity in inputs in S&T by Central (90%) and State (10%) Governments is indeed very striking. Unless this imbalance is corrected there is little hope of S&T playing its expected role in development of the entire country. The Centre should therefore seriously consider diverting a substantial portion of its S&T funds for State level S&T activity and development programmes. A begining may be made by shifting National S&T Agencies to State Capitals.

socio-economic development

It may be recalled that the National Committee on Science and Technology (NCST), after a detailed study involving hundreds of experts, had formulated (in 1972-74) a detailed 15-Year Perspective S&T Plan keeping in view national and socio-economic needs. The plan was widely publicized and discussed in open fora, technical journals and mass circulation media. The final S&T Plan document which emerged was widely welcomed and several of its recommendations have also been implemented. The NCST had visualized revising these Plans periodically but this could not be done since NCST itself was wound up around 1976. Inspite of this, the NCST S&T Plan serves as a guide in preparing development plans for various sectors even today.

The Approach Paper has also not referred to the excellent documents brought out by the Planning Commission on S&T Plans for successive Five Year Plans. Almost all the points and basic issues referred to in the Approach Paper have already been covered, indeed very effectively and in much greater detail, in the

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Planning at grassroots level, a must

Dr. A.N. Dutta

This article gives an insight into the typical problems related to the economic development of scheduled castes and scheduled tribes, the progress achieved so far and the future prospects. The author appreciates he beneficiary-oriented approach of the present development schemes. He, however, emphasises the need to locate thrust areas and chalk out minimum expenditure programme in order to achieve the desired goals.

THE TRIBAL CLASSES WHICH FORM THE human grassroots at the base of our indigenous culture have had their coutribution no less than any section of the society which form the modern political communes. It is not that the Planners had no sight of them in their planning vistas but in the din and bustle of accelerated development planning and the gyrations of the socio-political environment as well as the compulsions of the changing economic order, it has not been found possible to make for a solid economic planning for those sections of our society. The fact however remains that the administrative machinery has always been keenly aware of itsk responsibility to preserve their culture and traditions, their moral values and precepts in the social life as well as their influence in toning up the organisation in line with the development responses of modern society. At the same time, the admission is that a different outlook was taken in treating the subject with special care and chance had had it in the way that an integration could not be found possible with the mainstream of economic activities while conducting the course of their development. Recently, in May, 1988 in a special Meeting of the Planning Commission, the Prime Minister made a special mention to this aspect while advising on designing the necessary frontiers for the Eighth Five Year Plan. In all these respects, the attitudinal emerging focus on the Eighth Plan seems to be a little bit different from the traditional courses of economic planning in this country.

Shift in emphasis

One such very interesting area appears to be the concept of District Planning in a new form so that different idestities can be worked out corresponding to required veriable with targets and policy measures to achieve the individual goals set against each of these indicators. In this new exercise of challenging ideas and concepts, the socio-economic compulsions of development of the tribal sector perhaps pose a new challenge to meet and to establish new dimensions and criteria for an orderly growth and development. The Seventh Five Yer Plan itself observed that an assessment was called for "in order to ascertain if the major objective of narrowing the socio-economic gap between the general level of economy and social development and that of the Scheduled Castes, Scheduled Tribes and other backward classes has been achieved and to know how far the modified strategies have been successful in tackling the historical legacy of their backwardness." Earlier, the Tribal Sub-Plan Approach was adopted in the Fifth Plan and the special component Plans (for SCs) formulated in the Sixth Plan and this resulted in earmarked allocations apart from the general programmes for economic development. In the Sixth Plan, the emphasis shifted from welfare to family and beneficiary oriented development schemes within a general framework. However, in the Sixth Plan a definite target of assisting 50 per cent of the SC and ST families to jump the poverty line was mooted for the first time.

It has already been mentioned that Seventh Plan contained special allocation and special programmes of development of the tribal sector through specific component plans showing a Special Central Assistance counterpart both at the Central land the States level. For the first time, a differentiation was made in the occupational categories by demarcating the land-based activities from the non-land-based activities. It was admitted in the Plan Document as such that although the two occupational categories were not exclusive, the main problem continued to be the lack or inadequacy of assistance. Therefore, the best course open before the Planners was to concentrate upon beneficiary-oriented programmes although, on plain admissions, this suffered in most cases for a lack of procedural line-up and ties with other financial institutions.

Handicaps

The difficulty in regard to successfully completing a programme of plan development with desired objectives arises both from the nature of the structural

alues already in-built in the process and secondly, the ifficulty of involvement of the common people in the rocess. Despite a well-structured thinking, the ynamics of development has not been smooth but at iany places sloth and skimpy to say the least. It was herefore felt urgent that simultaneously, two props will ontinue to operate both as a compensatory and as a evelopmental measure, e.g., (i) a judicious mix of eneficiary-oriented programme, human resource levelopment and infrastructure development to help he thirty lakhs tribal families in their economic esettlement and (ii) in the protection sphere, legislative neasures already in force will be implemented stringently, s in the fields of agricultural tenacy, money-lending, lebt-replacement, bonded labour, labour, forestry, xcise and trade, However, despite promising support o help balancing the subsistence and commercial roduction in strengthening the infrastructural levelopment and reorienting existing eco-system owards their needs, the tribals received scantly llocation and problesm in fact mounted. It is still being amented at the Government level that "a policy for the ehabilitation of project displaced persons has to be ormulated at the national level" as an integral part of he general policy for the rehabilitation of the displaced ersons.

The main operational handicap is that the rogrammes for the development and welfare of the

Table 1

Sixth Plan outlays and Expenditure on Socio-Economic Programmes for SCs/STs and Backward Classes Rs. crores)

	Sixth Plan outlays	*Sixth Plan expenditure*
. Schedule Castes		
Staes' allocation for SCP* .	4204	3533
Special Central Assistance	600	595
Institutional finance .	N.A	2110**
	4804	6238
. Scheduled Tribes		
. States' allocation for TSP*	3521	3409
. Special Central Assistance	485	485
. Institutional finnance	N.A.	800**
	4006	4694
. Other Bankward Classes		
States' allocations .	154	150**
	240	250
. Centre/CSS		
Grand Total.......	9204	11332

Include outlay/expenditure unde welfare of Backward Classes Sector.
** Estimates

Source . Seventh Plan Document

tribals is bound to have a limited coverage. It was earlier conceded that sub-Plans would present an integrated view of the problems of these tribal areas, the broad objectives and strategies, an outline of the various programmes, financial outlines, physical outputs and the legislative and administrative frame, in other words, a thorough blueprint of the development of the region was to be made of the District Plan as such. The Planning Commission also circulated an exhaustive note on the preparation of sub-Plan for tribal regions within the State Plan. The totality of the SC and ST groups constitute one-fourth of the total population of the country under the care of protection and planned development. The Seventh Plan provided for programmes for the socio-economic development of these groups with a view to particularly strengthening their economic base, through the mechanism of Scheduled Castes Component Plan and Tribal Sub-Plan and by ensuring compliance with the constitutional provisions and laws. Accordingly, the following programmes for SC and ST along with financial provisions were drawn up.

Urgent steps

A clear picture has been obtained on the progress so far made in this direction through the mid-term evaluation of the Seventh Plan. The few steps which are deemed urgent and therefore immediately operative are :

(i) the beneficiary-oriented sector accounts only 31 per cent for and 16 per cent respectively under Special Component Plan (SCP) and Tribal Sub-Plan (TSP) and a strong case exists for improving this percentage,

(ii) equally, an important need is felt for refinement in the process of identification of schemes relevant for SC and ST for ensuring that they get social attention in financial and physical terms,

(iii) in regard to allotement of ceiling of surplus land to SCs and STs, actural implementation and delay in updating o land records lead to dislocation and lack of attention among them and therefore this needs particular attention, and

(iv) the demoraphic scenario and the occupational pattern should be taken special care of and a bigger role should be assigned to the tribals in the forestry sector and in plantation, harvesting and marketing of forest produce.

In this respect, few other observations appear mostly pertinent. A vital consideration was to follow up recommendations of a bench-mark survey taken up in certain tribal areas sometime back with another survey at least in some critical tribal areas to review the extent of importance in their economic status. It is also recommended that some neglected items of infrastructure in tribal areas like the PDS system who receive more attention and such retail centres in tribal areas should be run either by the tribals direct or by local bodies who may be suitably assisted. Particular emphasis should be given on the utilisation of the

infrastructure already created or on steps taken to set up new infrastructure for the optimisation of the support functions involved.

The States should have a seminal role to play in this regard. The Mid-Term Review suggests these States should take steps to scrutinise their land alienation registration to plug the loopholes in them for effective prevention of alienation of tribal land to non-tribals and to make necessary administrative arrangement with requisite staff for detction, disposal and restoration. Equally, attention should be given to the tribal craft upgradation and the various rural development programmes in the tribal areas and involving the beneficiaries in these programmes. At every stage, an evaluation of the working of the agencies in the SC/ST sector as well as the various State development programmes must be made.

Cardinal factors

A general strategy has therefore to be formulated to achieve the two-fold directive of Plan formulations and policy recommendations. For this purpose, the special problems of the tribal regions should be stated and a functional approach has to be established through the efficient working of the Sub-Plan in this regard. Particularly important is the effective implementation of the special area programmes and also the broad strategy and organisational issues at various levels of development. At this stage, it is interesting to find that the Planning Commission recommended a few important steps which in later period deemed as measures for the purpose of general development of these backward classes.

1. Identification and demarcation of areas of tribal connection.
2. Identification of socio-economic barriers and promoters of change and development.
3. Assessment of potentialities, special problems and felt needs of the tribal areas.
4. Assessing resource availability for the Sub-Plans.
5. Formulation of sectoral programmes.
6. Devising a suitable administrative set-up.

Table 2

Programmes for SC And ST : Financial Provisions

	Seventh Plan	*1985-86 Actuals*	*1986-87 Anti Exp*	*Total 1985-87*
A Scheduled Castes				
1 State flow	6205 67	941 64	1179.30	2120 94
	930 00	166 00	175.00	341.00
2 Special Central Assistance				
Total (A)	7135 67	1107 64	1354 30	2461 94
B. Scheduled Tribes				
1. State Flow	6316 63	952 40	1238 13	2190 5?
2 Special Central Assistance	756.00	140 00	155 00	295 (
Total (B)	7072 63	1092 40	1393 13	2485 53

Source: Mid-Term Plan Appraisal, Seventh Plan.

What to do

It is quite encouraging to learn that the scheme of Tribal Marketing Federation (TRIFED) has been recommended as an apex organisation to provide for inter-State marketing of agricultural and minor forest produce. Although this has not taken a good start as yet, the observations made in the Mid-term Review of the Plan are both vital and critical, in the nature of making the programmes specific and selective, integrating such activities with the macro dynamic developments of the rural economy and more importantly, policy directive as a working support in other areas like industrial services. In accomplishing all the desired goals together which are at time both complementary and competitive, a proper management approach is found exceedingly urgent. For a long pending socio-structural problem like this, urgency is particularly required but unless the thrust areas can be located and the minimum expenditure programme with alternative formulations are chalked out, it is difficult to conceive of an early success in making the exercise an alround success. ☐☐☐

Larger acceptance of Biogas plants and improved chulhas

Over 10 lakh biogas plants of family size have been set up in the country so far These biogas plants are resulting in a saving of about 40 lakh tonnes of firewood valued at Rs. 146 crores a year At the same time, about 176 lakh tonnes of high quality organic manure is made available from these plants every year.

The biogas programme has picked up extremely well in the past three to four years and achieved a larger acceptance from the people. In 1987-88, a total of 1 73 lakh biogas plants were installed against a target of 1.2 lakh biogas plants. While earlier, farmers owning larger number of cattle and big farms were setting up the biogas plants, now the middle and small level farmers are also taking to these plants because of the availability of newer, efficient and cheaper models.

Greater emphasis is now being laid on maintaining quality of construction and providing repair services to increase their workability According to a perspective plan formulated by the Department of Non-Conventional Energy Sources, 12 million biogas plants are envisaged to be installed by the year 2000 A D. Research and development efforts are being undertaken to construct biogas plants which can produce greater results even with smaller amount of waste.

About 4.5 million houses are using improved chulhas at present resulting in the saving of 30 lakh tonnes of firewood valued at Rs. 120 crores per year. These chulhas are popular among users, particularly rural women. About 50 models of chulhas are in use at present. There is a proposal to install 30 million improved chulhas during the Eighth Plan. Intensive development in this direction will be particularly made in areas around reserve forests so that deforestation is checked. ☐☐☐

Planning process calls for decentralisation

Dr. (Mrs.) Savitri Sharma

In a vast country like India with innumerable variations in climatic, geographical, political and socio-economic conditions, centralised planning is bound to suffer from crippling limitations, the author feels In this article she attempts to suggest a viable model for the decentralisation of our planning process; pinpoints the functional reasons for decentralisation in the Indian context and the measures to be adopted for the success of decentralised planning.

THE SOUL OF INDIA LIVES IN VILLAGES. Thus said the Father of Nation, Mahatma Gandhi. It follows from the same that a relevant and meaningful planning process in the country must be based on the adoption of village economy as the basic unit of planning. In a vast country like India with innumerable variations in geographical, climatic, soil and rainfall conditions, on the one hand, and political, socio-economic institutions, customs and traditions on the other, straight jacket centralised planning techniques suffer from crippling limitations. Though efforts have been made towards decentralisation of our planning process, the issue has still remained more a subject of academic debate rather than of actual implementation. An attempt has been made here to suggest a viable model for decentralisation of our planning process.

Owing to the current preoccupation with issues relating to Centre-State relations, there is a danger that a closely related set of issues concerning decentralisation below the state level may be either overlooked or postponed for later consideration. The two sets of issues need to be viewed together and found solutions that are not only consistent with each other but mutually reinforcing. Many states in India are larger than nation states like France and Germany (one larger than even Japan) in terms of area as well as population, and therefore, even after considerable devolution of power from the Centre to the states there would be excessive centralisation unless a systematic effort is made to decentralise much further. Though zilla perishads (at the district level) and panchayat samitis (at the taluk level) have been at work in several states, as also gram panchayats at the village level, the actual decentralisation of political and administrative authority and the related decentralisation of economic functions and responsibilities have been so far of a limited nature.

Why decentralisation

An appreciation of what precisely are the functional reasons for decentralisation in the Indian context, apart from the greater scope it would provide for popular participation,would be quite relevant at this stage:—

(i) An important reason why a sizeable chunk of the rural population remains largely untouched by the processes of development is that they live in very small villages, often with less than a thousand inhabitants, separated by considerable distance from each other as well as urban areas. This affects adversely the prices they are able to secure for their products, the stimulus to produce for larger markets, the availability of the required inputs, and the viability of the educational and health centres essential for meeting their requirements. Close linkages through appropriately located infra-structural investment could be best secured only by local participation in the development process.

(ii) There has been a growing awareness of the fact that the conventional sources of energy are not only inadequate but also too costly to sustain braod-based rural development particularly in the context of the requirements of higher productivity in agriculture and allied activities. To overcome this crucial bottleneck, it is essential to evolve, according to the conditions in each area, appropriate mixes of these sources of commercial energy with as yet unconventional sources such as from wind, animal and plant wastes, and sun. Isolated but significant experiment within India itself have provided the viability of community gas plants for generation of electricity and production of organic manure in each village, as well as of mini-hydel plants, depending on the availability of the necessary resources in the locality. The possibilities this opens up are in fact immense. The diffusion of such knowledge and technique for rural development and building up an adequate energy base using all available sources, require agencies working in close association with communities in villages

and small towns and having at the same time the necessary technical and financial support from organisations oriented to these objectives.

(iii) The problems posed by private ownership of land, fragmentation of holdings, and distribution of available water are so complex in character that efficient land and water management can be achieved only by making the village a basic unit of development planning.

(iv) The soil, the topography and other agro-climatic conditions vary so greatly within each state the programmes for raising agricultural productivity call for considerable experimentation, adaptation and flexibility according to the environment in each region and sub-region. This is hardly achieved when the programmes are formulated at the state level and implemented through a multiplicity of departments functioning on the basis of directives from above.

Multi-tiered decentralised system

A decentralised system of development planning and implementation, adequate for performing the functions indicated above has of necessity, to be multi-tiered. Besides, it should not only have at its disposal the necessary technical expertise and administrative personnel but offer sufficient scope for the active involvement of political and social forces at appropriate levels. Some progress has been made in this direction over the last decade through panchayati raj institutions and formulation of schemes for implementation at the block and district levels, but the organisational framework now existing even in the States where most progress has been made in this respect has some very serious limitations.

In the present set up, the administrative coordination at the district level of the works of different district level officers in various departments and non-official agencies is at the best ineffective. The result-oriented approach with a view to attaining the definite objectives is more often than not missing. Duplication of work has sometimes been observed between the staff working under the different schemes in the same department. Besides, there are similar types of schemes run concurrently by different departments resulting in overlapping and duplication of work. For instance, departments of minor irrigation, state electricity boards, state ground water boards, land development banks and agro-industries corporations could all be concerned with the digging of tube wells, grant of loans for this purpose and their energisation and maintenance. Thus, there are too many parallel and vertical lines of control without any horizontal linkage.

Often, what has come to pass now for decentralised agricultural and rural development is primarily distribution of funds through governmental agencies and financial institutions at the block level, for purposes such as acquisition of milch animals and bullock carts or purchase of fertilisers and digging of wells. This is a relatively simple task for the administrative and technical personnel as now organised at the district and block levels, since it calls for very little collaborative effort and the funds made available can be distributed by the block development officers (BDOs) on the basis of guidance provided separately by the personnel belonging to different departments. However, these programmes fail to have significant impact on overall development since such outlays worked out on the basis of straight jacket formula are not designed as a part of a more broadly conceived programme for raising productivity and broadening markets in the areas in which the beneficiaries are located. Besides the crucial impact output linkages which have an important bearing on the success of the programme are not taken care of.

The "many parallel and vertical lines of control" at the district and block levels, which now come in the way of a more integrated approach to decentralised development, reflect not only the hierarchical structure of the departments and agencies concerned and their tendency to be insular but also the channels through which the available funds are allocated and distributed and the locus of political and administrative authority as now exercised.

A development block, co-terminus with the territorial jurisdiction of a panchayat samiti, is an appropriately sized unit for framing and implementing most of the programmes required at the field level for the development of agriculture and related activities. However, such block level planning can help to accelerate agricultural growth and rural development only if (a) it is strongly focussed on the feasible improvements in land and water management in each locality, (b) the scope for development of animal husbandry, social forestry, bio-gas, organic manure, etc. is explored along with the prospects for such improvements in land and water management; and (c) it becomes possible thereby to formulate and implement a variety of schemes that are mutually supportive. This is, therefore, the level at which decentralised development planning needs to be strengthened most.

Water a dominant arbiter

However, develpment block, the lowest unit of planning in the plain areas, may not be suitable in a montane eco-system on acount of relatively low population density, innumerable geographical barriers and communication hurdles. Further, perhaps more than other elements of nature, water is a dominant arbiter of man and environment in the hills. A geo-hydrological watershed would, hence appear to be a better substitute for a development block as a unit of planning. A watershed may be distinguished from the catchment area of a river system, the latter, besides being in the higher altitudes, is generally of ampler dimensions. The planning treatment for a catchment area may be different from that for a watershed, but the implications of adoption of the two physiographic entities, ie. catchment area and watershed areas, have to be worked out in terms of geography, geomorphology, geo-physics, socio-economics, ecology, administration etc. For planning and development purposes relative to size, a watershed may generally be divided into three categories: (a) macro (b) meso, and (c)

micro. It bears reiteration that the planning process of micro, meso and macro watershed, catchment areas and mountain ranges should be enmeshed and integrated.

Intermediate tier authority

Apart from framing and implementing programmes for raising productivity in agriculture and related activities decentralised planning is required also for (a) strengthening the linkages between villages and towns through infrastructural investments such as in feeder roads, transport, storage and marketing facilities, and energy generation and distribution, and (b) building up networks of educational, health and technical training facilities for catering to the needs of rural and small urban communities. Though a district may be too small a unit for this entire range of responsibilities to be left to development planning at this level, there is no doubt that many of the things to be done can in fact be taken up at this level through agencies that are familiar with local conditions and requirements. Such tasks must be therefore explicitly incorporated in district planning. additionally to those involved in the coordination and servicing of development activities at the block level.

At the same time, a district could be too small unit for planning some of the infra-structural facilities required for decentralised development, such as generation of energy from conventional commercial sources and development of certain kinds of communication facilities and even for making adequate use of some of the higher technical personnel needed for particular tasks at this level. There is therefore some danger in placing the district at the apex of decentralised planning conceived along the lines indicated above. To avoid such danger, and to ensure that such decentralised development planning receives adequate support from political forces at all levels, there is a strong case for introducing an intermediate tier of executive authority (between the district and state-level) for developmental purposes. In the fitness of things, it could be suggested that a commissioning level i.e. a cluster of four to five districts could be adopted as the appropriate intermediate tier executive authority. This would be large enough to provide some of the advantages of scale where they are essential and yet not so large as to lose the advantage that come from compactness and easy accessibility.

Such development divisions will have some degree of homogeneity for purposes of planning, though the National Sample survey has demarcated a larger number of agro-climatic region in the country, several within each state, most of them are still too large to be treated as co-terminus with development divisions. Such regions could be split into two or more divisions on the basis of criteria such as population, area and accessibility. Thus, a number of development divisions could be constituted in each state as indicated below:

	Number of agro-climatic regions (NSS)	*Number of proposed development divisions (Approx)*
Andhra Pradesh	3	6
Assam	2	4
Bihar	3	7
Gujarat	5	7
Haryana	2	3
Jammu & Kashmir	3	3
Karnataka	4	6
Madhya Pradesh	5	10
Kerala	2	3
Maharashtra	6	10
Orissa	3	6
Punjab	2	3
Rajasthan	4	6
Tamil Nadu	3	7
Uttar Pradesh	5	13
West Bengal	3	5
	55	99

Measures for success

Under this three tier structure, specified functions appropriate to each structure could then be developed to these Divisional Development Authorities (DDAs) constituted for the purpose and through them to Zilla Parishads and Panchayat Samitis.

The success of this decentralised planning experiment would, however, crucially depend upon the extent to which it receives political, technical and financial support. To this end the following measures may be imperative:-

(1) A policy planning cell may be constituted in each DDA (Divisional Development Authority) as the apex body in policy matters. It will consist of the representatives from the State Cabinet, local MPs and MLAs and the representatives from Zilla Parishads and Panchayat Samitis.

(2) At the executive level, each DDA may have a Programme Executive Council which would be needed by a Divisional Development Commissioner, selected among the most competent and experienced officers known for their integrity and commitment, the Deputy Commissioners of all the districts in the division, senior representatives of all the development departments at the state level as well as technical personnel from relevant public corporations and financial institutions (such as state ground water board, agro-industries corporations, and lead banks). As the chief executive of the DDA, the divisional development commissioner would be the executive secretary of the Policy Planning Council and chairman of the Programme Executive Council, with adequate powers to give directives to the administrative and technical personnel located at the district and block levels.

(3) It may be ensured that at least two fifth of the funds available for plan outlays at the State level is directly assigned to the DDAs without being routed through individual departments.

Working of the system-some observations

An attempt has been made in the foregoing paragraphs to indicate the broad outlines of the organisational structure. It is felt that the matter regarding details may be left to be worked out by the States in term with their peculiar socio-economic and political circumstances. However, a few observations as to how

he working of the system is visualised would not be out of place.

First and foremost, it is of utmost importance that ome safeguards are built into the system to prevent lecentralised development planning from being used to erve the sectarian interests of propertied classes. To his end, it is imperative to ensure-

(1) that the political representation in Panchayat Samitis and Zilla Parishads is based on the principle of proportional representation of each group.
(2) that there ought to be an in-built flexibility in the system so as to permit active involvement of voluntary organisations.

Given the necessary political orientation and support fairly clear and consistent strategy of development an be built into decentralised planning in the country within a broadly conceived framework as outlined bove. In agriculture, the main thrust will have to be the armers with small and marginal holdings, since it is hey who have the greatest difficulty in mobilizing esources and raising productivity. For those with little r no land the stress could be on increasing employment pportunities in activities related to agriculture such as nimal husbandry as well as through special work rogrammes (like the 'food for work' programmes) elated to schemes for intensive agricultural development and infra-structural investments at the block level. Thus the means of promoting increases in productivity as well as employment would be primarily through integrated programmes for improvements in land and water management in cropping patterns and agricultural practices.

As agricultural productivity and rural income pick up on a broad front, other activities such as marketing can be expected to expand more rapidly. There could also develop adequate demand for various manufactured products for sustaining small and medium-scale industries in adjacent urban and semi-urban areas. Inadequate sources of cheap energy and lack of other infra-structural facilities have been to a large extent responsible for migration of labour to larger towns and cities in search of secondary and tertiary employment, but the prospects of Non-conventional Energy Sources (NCES) becoming sufficiently economical for generation of power have helped to improve the prospects for a more decentralised pattern of development. The main objective of decentralised development planning should be in fact to visualise these possibilities concretely within each region and sub-region in a systematic and practical manner, help build up the infra-structural facilities required, and assist in every way the changes in technology and organisation that are needed for a broad-based process of economic and social transformation. □□□

The Mandal Panchayat System in A.P.

Richard M. Tom

Though Panchayati Raj System was introduced in India as far back as 1959, and was heralded with great fanfare, it failed to achieve the primary goal of democratic decentralisation and remained in a moribund state in most parts of the country. The author here stresses the need to revitalise, restructure and strengthen these institutions for better rural development. The idea of the Mandal Panchayat System aiming to take administration closer to the people and to accelerate the tempo of all round progress has been analysed in depth with particular reference to A.P.

WITH THE DAWN OF FREEDOM, THOUGHT was given to the method of involving people in their own welfare in a democratic state. As a first step, states started through legislation to renew the old concept of gram panchayats and gram sabhas, so that people's involvement in their affairs at the grassroots can be started. This approach was reflected in the First Plan document (1951-56) which referred to the need of "establishing over a period of years Panchayats for villages or gr(ip of villages: they visualised civic, and economic activities for a village community as one of the functions of Panchayats". This concept was added on by Community Development programmes started in 1952 The National Extension Service followed Community Development as the vehicle through which idea of community development was carried out.

The three-tier Panchayati Raj

A committee was appointed by Government of India in 1956, under the Chairmanship of Sri Balwantray Mehta to study the Community Development Programmes and National Extension Services and to suggest some measures for the better implementation of rural development programmes. On 24th November, 1957, the committee submitted its report recommending a three-tier (Zilla Parishad, Panchayat Samiti and the Village Panchayat) system of local government which was christened as Panchayati Raj. The National Development Council on Januay 12, 1958 agreed to the recommendations of the Balwantray Mehta Committee. The Government of India concurred with its recommendations and gave full liberty to the States to develop self-government pattern suitable to the local conditions.

The three-tier Panchayati Raj which is a complex and vital system for rural local self-government in India, was established for decentralisation of authority and as an instrument for rural development. It mainly aims to awaken the rural masses of their rights and challenges in a democratic set-up of planned social change stressing political consciousness at the grassroots level.

Panchayati Raj system was first introduced in October 1959 in Rajasthan followed by Andhra Pradesh. They were followed by Maharashtra and Gujarat and the system is extended almost throughout the country; but in different ways in different states. In Andhra Pradesh, the system was a three-tier structure with Village Panchayat at the bottom, the Panchayat Samiti at the intermediary level and Zilla Parishad at the apex level of the district. The Government of Andhra Pradesh accepted several of the major recommendations of the Balwantray Mehta team. However, in some aspects, it deviated from the recommendations of the Mehta team. The Act came into effect from November 1959 after being amended several times. The system in Andhra Pradesh is based on Gram Panchayat Act 1964, and the Panchayat Samiti and Zilla Parishad Act, 1959.

The two-tier system

Even though the Panchayati Raj was heralded with great fanfare, it failed to achieve the primary goal of democratic decentralisation, i.e., decision making process at the grassroots level and remained in a moribund state in most parts of the country. Several other aspects were also attributed to its failure. Keeping in view its drawbacks, the Government of India appointed another committee on Panchayati Raj Institutions in December 1977 under the chairmanship of Sri Ashok Mehta, a former deputy chairman of Planning Commission to suggest measures to revitalise, restructure and strengthen the Panchayati Raj institutions. The Mehta Committee submitted its report to the Government of India in August 1978, in which it was suggested to create a two-tier Panchayati Raj in place of the three-tier structure recommended by the Balwantray Mehta. The two-tier structure would consist of Zilla Parishad at the top and Mandal Panchayat at the base. Most of the states did not accept this new system and carried on with the old three-tier system.

The Mandal system

The recommendations of Ashok Mehta Committee for constituting Mandal System influenced the governments of Andhra Pradesh and Karnataka. The Government of Andhra Pradesh appointed a cabinet sub-committee to study the recommendations made by Ashok Mehta for creating Mandal Panchayats. The sub-committee favoured the recommendations of Ashok Mehta to create Mandal Panchayats, but the Panchayati Raj Institutions Committees headed by Shri C. Narasimhan (1981) did not favour the constitution of Mandal Panchayats and preferred the continuance of the three-tier systems. The Government of Andhra Pradesh accepted the subcommittee report to create Mandal Panchayats with some modifications based on Narasimham committee report. The Government also decided to retain Gram Panchayats at the grass-roots level. The idea to create Mandal Panchayats is to take administration closer to the people, to accelerate the tempo of all-round economic development and to provide effective delivery system for various welfare measures of the state and central governments to the rural people for whom they are intended. Thus on 26th July, 1986, the Government passed the Bill to create Mandal Praja Parishads (MPPs), Zilla Praja Parishads (ZPPs) and Zilla Pranalika Abhivrudi Mandals (ZPAMs).

Objectives of the Mandal System

The Government further explained the objective of the mandal system thus:

(1) To involve people at all levels in developmental programmes to increase their participation in the making of public policies.
(2) To provide adequate financial powers to these programmes;
(3) To implement welfare schemes for the benefit of the poorer sections.

To achieve these objectives the mandals will work dedicatedly for;

(1) The integrated and all round development of the State;
(2) Welfare of the six crore people of the State;
(3) Providing such day to day necessities of life and medical and health, education and agricultural services.

Some notable merits are:

(1) There is an opportunity for the people to involve effectively in the political process at the grass-roots level of the system;
(2) It seeks to provide the basic educational facilities to the illiterates to develop their political awareness, leading to a better standard of life;
(3) It gives encouragement to the concept of self-reliance among he rural people;
(4) It can reduce the social tensions and economic indebtedness among the rural masses.
(5) It can generate employment through the self-employment schemes and developmental programmes given by the industrial centres to the unemployed rural people.

Four tier district administration

In the present system, the presence of District Planning and Development Board would dilute the concept of Local-self government and result in a four-tier set-up which was not envisaged by Ashok Mehta. The four tiers are Zilla Pranalika Abhivrudi Mandals (ZPAMs), Zilla Praja Parishads (ZPPs), Mandal Praja Parishads (MPPs) and Gram Panchayats (GP). The ZPAMs is created for solving the district level problems without taking them to the state level. The Zilla Pranalika Abhivrudi Mandals will now look after all functions of distributing funds under the Integrated Rural Development Programme, the District Rural Development Agency and the Kranti Pathakam. It has been provided with powers to supervise the Presidents of M.P.Ps and Chairman of Z.P.Ps. The Zilla Parishad Abhivrudi Mandals will be headed by Ministers belonging to the respective districts. The post of Vice-Chairman is made as elective. In terms of authority, the Vice-Chairman will have wide powers as he is the Chief Executive and the District Collector is expected to be the Member-Secretary. The Zilla Pranalika Abhivrudi Mandals are also charged with monitoring of development activities in the district, besides coordinating and consolidating the plan.

The Zilla Parishad earlier was the apex body at the district level. Now in addition to Zilla Parishads, there will be a new body named as ZPAM. The Zilla Parishad is renamed as Zilla Praja Parishad. It will consist of Chairman, Vice-Chairman, Presidents of Mandal Praja Parishads, MLAs who are already members of MPPs in the district, members of the Lok Sabha from the district and also members of Rajya Sabha who are also members of the MPPs in the district. Besides, there will be one elected member belonging to the minorities based on religion or language.

The Panchayat Samiti will now be called as Mandal Panchayat. In the new set-up, there are 1104 Panchayat Mandals. In this body there will be a Mandal Praja Parishad president elected directly, there will be a Vice-President elected indirectly by the Sarpanchs who had been already elected on non-party basis, also MLAs and MPs as ex-officio members. There will be one representative of the minorities based on religion or language.

Recently a unique institution of Rashtra Krashaka Parishad is created at all the Mandal levels. A bill was also introduced in the legislative assembly in March 1988. This body will be self-supporting and will look after the requirements of the local farmers. It will be an autonomous and all the necessary financial assistance would be provided by the Government.

Gram Panchayats

The Government of Andhra Pradesh decided to retain Gram Panchayats which is the lowest unit of the three-tier system. The G.Ps are sheet anchors of Panchayati Raj administration and are also closest to the people. Gram Panchayats are constituted either for

the whole village or for parts of the villages or for groups of villages. In Andhra Pradesh there are about 19,517 Village Panchayats. In every unit there will be a Sarpanch who will be elected on a non-party basis. The number of members of a Panchayat varies depending on the population of that village. There will be a Upa-Sarpanch to assist the Sarpanch and an Executive Officer. The Government of Andhra Pradesh recently decided to appoint Integrated Executive Officers to Gram Panchayats taking the village as the unit of administration. The functions of these officers are to look after various issues like sanction of old age pension, widows' and agriculture labourers' pension etc.

Special features

The Special features of the new System are:

(1) For the first time in India seats are reserved for the backward classes and women in political institutions;
(2) For the first time a provision has been made for direct election to the posts of Chairmen of ZPPs. Similarly there will be direct election for the posts of Presidents of Mandals;
(3) The Act provides for an anti-defection clause which would prevent horse-trading;
(4) One representative of minorities, linguistic or religious will be elected to the mandals and ZPPs;
(5) The Zilla Pranalika Abhivrudhi Mandal is a new body created by the new Act. It will advise the ZPPs on the developmental activities that may be undertaken by them and also perform such other functions as the Government may by notification entrust to it from time to time;
(6) Elections would be held on party basis. This would be the first instance in the country where elections would be fought on political party symbols in the Panchayati Raj system;
(7) Abolition of Panchayat Samitis at the block level and creation of Mandal Praja Parishads and creation of Revenue Mandals in place of talukas and revenue firkas;
(8) Rural citizenry unde the Mandal set-up will get varied benefits like cooperatives which supply various things through a single window service;
(9) In the present set-up, the Zilla Praja Parishad Chairman is made as the Chairman of Standing Committee in the District and not the Collector as earlier;
(10) Greater sanctioning powers are being given to ZPs and MPPs; and
(11) The Mandal Praja Parishad can only raise loans with the prior permission of State Government.

The Revenue Mandals

The Government of Andhra Pradesh has also decided to create a separate body called Revenue Mandals in place of taluks and revenue firkas to bring administration to the door steps of the villages and for the sake of administrative decentralisation. This refers to the transfer of authority from higher to lower levels so that the lower authority enjoys autonomy of functioning. On 15th May, 1985, in place of 305 taluks, 1104 revenue Mandals and 1084 revenue firkas were established. Every Revenue Mandal is to be headed by Mandal Revenue Officer (MRO) who would be in the rank of Tahsildar or Deputy Tahsildar. The MRO who is in the rank of a Tahsildar has a gazetted status and that of Deputy Tahsildar has a non-gazetted status. The MRO is assisted by appropriate staff like Senior Assistant, Head Assistant (Head Clerk), Mandal Revenue Inspector and Junior Assistant, Head Assistant (Head Clerk), Mandal Revenue Inspector and Junior Assistant. There will be a Surveyor or a Deputy Surveyor in charge of land records.

The benefits of Revenue Mandal include:

(1) Rural People would get their work done easily from mandal headquaters;
(2) The rural people can approach the officers without any fear to get some specific work done;
(3) A number of benefits like landless agricultural workers pension scheme of Rs. 30/- per month, widow pension of Rs. 50/- per month and old age pension of Rs.30/- per month had been introduced and a large number of people would be availing of these facilities,
(4) People whose income is less than Rs. 6000/- or who fall below the poverty line will get rice for Rs. 2/- per kg, and
(5) Land would be distributed to the landless poor by the revenue mandals.

Conclusion

The Panchayat Mandal system created by the Government of Andhra Pradesh for administrative decentralisation should function in true spirit. Under this new system, the Governmet should see that the benefits provided are reaching the under-privileged classes for whom they are meant. The Government wanted that each Mandal centre should flower into a Mini-Hyderabad (Urban) with all basic amenities and facilities of day-to-day life for rural poor. It is to be seen in the coming years, whether this new system would provide each local unit autonomy in its functioning, whether this system would benefit the rural poor to become self-reliant and whether this system would be able to bring involvement of rural poor in the implementation of programmes of economic development. □□□

(Contd. from page 7)

"Report of the Steering Group on S&T and Environment for the Seventh Five Year Plan (1985-90)

There is, therefore, no dearth of earlier literature on S&T planning, policies, position papers, perspectives, S&T in industrial development, strategies for action etc. What is lacking is the will to implement S&T Plans and Science and Technology Policies already formulated through appropriate follow up action. The emphasis therefore, should be more on *action* rather than another exercise in planning for S&T or use of S&T in planning.

Attuning the masses to new changes

K.M. Anees-Ul-Haq.

In this article, the author highlights the crucial role of mass media in allaying the fears and apprehensions of people about new changes. He is all praise for Doordarshan for its wide coverage to national and international affairs. In his view, T.V. can play a decisive role in educating the masses.

THE DEVELOPMENTAL ACTIVITY OF ANY COUNTRY depends on various factors like planning, economic, social and cultural make-up and the urge to make the country progress. The urge will not come to the people until and unless they know the benefits of the development. In a stagnated society one can hardly think of development and progress while in a society where there is a change every moment, the development can be fast All these factors again depend on education and information. Radio and TV are the two instruments that have played a very significant part in educating the people about the changes taking place all over the world in the field of agricultural, industrial, cultural and socio-economic development

Ignorance is a curse. This curse can be diluted only through education and dissemination of information in a country like India which is on the march to development, though providing education to every individual is a gigantic task. Informal education is the only remedy through which the mass illiterate public can be informed within the shortest span of time and here media becomes the sole responsible instrument in imparting education.

Role of print media

Before the invention of the print media, the masses had contacts with the Mutts, Ashrams, Dargahs Churches, Monastries, etc. These were the only institutions which were giving information on the philosophy of life and moral education. Only a few had the hereditary right to acquire education. The others were ignorant of the happenings around them. The advent of the print media and the modern method of eduction, though imparted education to the hereditary classes only but the same classes brought about the revolution in the society and later on education did not remain as a right of the few. The barricades were removed for other sections of the society. The process of school education continued but it could not fulfil the desires and ambitions of the great thinkers of the society for scientific awakening, which was the need of the hour.

One thing we have to remember, is that till 1960 the Print media did a commendable job in informing the people about the new developments taking place in the world.

Transistor revolution

After the advent of Radio, the information started flowing with ease. The real revolution in the broadcasting came in 60s with the transistor invention and it became common within no time The number of people who had access to the transistor increased manifold in all sections of the society which helped them to know about the world. One greatest example of the part played by All India Radio in 60s, is the green revolution of 1966-67 which made India self-sufficient in the field of food production. Though the new concept of agriculture, the modern methods and the new technology were made available to the farmers since First Five-Year Plan itself, the minds of the farmers in India were not fertile enough to accept the new methodology and there was no other media which was as handy as the Radio to reach all the people and tell them about the benefits of the new methodology India being a multi-regional, multi-lingual and multi-religious country with diverse cultures and traditions, any new invention is received with suspicion rather than with open-heartedness. Take the example of State of Mysore in 20s when the Krishnarajasagar project was completed and the water form the dam was released for irrigation for the second crop to the farmers, and when some progressive farmers started cultivating the second crop, the people refused to purchase the second crop in the belief that the second crop, if taken, will make them sick, because it is against the concept of nature and for every small sickness which cropped up in the society, they blamed it to the eating of the second crop produce. So the progressive farmers had to stop cultivating their lands for the second time.

There was a strong rumour in Punjab and Western Uttar Pradesh when water was released from Bhakra

Nangal Dam for cultivation; that the crop grown out of that water did not contain any nutritional value because of its already being used for generating electricity.

The poultry farmers has to struggle hard till the 70s because the eggs produced by the newly bred birds were not acceptable in the market as they were scientifically bred.

In 1978, U.P. Agriculture Department at Gorakhpur sought the help of Station Director in popularising the use of fertilisers in the Terai belt of North-eastern U.P. where the farmers were not only agitative but violent also whenever the Agricultural Officers reached them for making use of the fertilisers.

The Farm Radio Officer of the Gorakhpur Station of AIR had to adopt a novel method in the programme continuously for 40 days by making the officials of the agriculture department as a migrating tribe and making them settle in one farm area and spread those fertilisers in the dark night in the corner of the field.

Everyday the rural broadcasts would tell the people the stories of ghosts and 'zins' to attract the villagers to listen to the programme and one day they said that ghosts were in existence and the people could go and see the particular farm, in a particular corner where the plants have grown higher when compared to the other part of the field. This made the villagers go to the farm and ascertain for themselves that there was some mysterious power behind the high growth of the plants in that particular corner. So a big gathering started going to the field and watching the growth. A rumour started flowing that ghosts are responsible for this. After some days the Radio announced that it was not due to the supernatural power or ghosts, which culminated in getting a very high yield from that particular field compared to the other parts of the field, but it was due to the modern method of using fertilisers which were spread by technical officers from the Agriculture Department of Uttar Pradesh, disguised as tribals. As a result of the broadcasts, the Terai region of North-eastern U.P. overtook the Western U.P. in rice production. The point that is being emphasized here is that AIR played a significant role through its broadcasts in increasing agricultural production which made India self-sufficient in the production of foodgrains.

Right from the beginning, the Radio attracted the attention of one and all and made inroads into all sections of the society. This did succeed in changing the thinking of the people particularly the rural masses. This medium adopted various formats to impart information to the masses. Various methods were adopted to make the message crisp and clear. It created awakening among the people about modern method of agriculture, evil of dowry, child marriages, education, untouchability, family planning, etc.

Advent of TV

The invention of the transistor set was a boon to the broadcaster. The sound medium exploited it to the extent possible but before it could fully reach the zenith, a new revolution was heralded on the horizon of communications. That is the Magic Box or 'Idiot Box'.

TV which is the most fascinating medium was started in India for educational telecasts on an experimental basis in the year 1959. Much water has since flown. Now it covers 70 percent of the population, this medium is as gripping as it is complicated. It requires huge manpower and expertise. If properly used, it is more beneficial than any other existing medium. Therefore the role played by it for the development of this country is more rewarding than any other medium. Within a short span of time, the whole country has been linked up with Delhi with a number of low power transmitters. There is no activity left where its impact is not felt. The biggest contribution of the medium is that it has eradicated the problem of student agitation all over India. No major agitation of the type which was taking place before 1983 was seen during the last 5 years. The agricultural programmes of Jalandhar TV are greatly responsible for the higher production in a State like Punjab, whereas the credit goes to Delhi Doordarshan for the increase in production in Haryana and Western U.P. The marvellous job done by Srinagar Doordarshan in the production of apples through its programmes is commendable. Fifty percent of the apple crop used to get affected by the various pests which were uncontrollable and it was difficult for the experts to reach the valleys and mountains of that State to make the people use the pesticides to have a control over the pests. It is only through TV that the message could reach every nook and corner of Kashmir to control the pests through the use of pesticides. Now there is a healthy competition between Himachal Pradesh and Kashmir to overtake one another in the production of apples.

It was due to great contribution of TV to the development of target areas in the state of Andhra Pradesh, Karnataka, Orissa, Bihar and Rajasthan during the SITE period that the efficacy of Indian TV was recognised internationally during 1975-76. This experience had convinced the Government to go in for the expansion of TV by leaps and bounds. Another significant contribution of SITE experience was that in a multi-lingual country like India, audio-visual transmission of the developmental messages proved to be successful and effective. This fact was recognised by the United Nations also.

At present TV in India is the largest network in the Third World countries which sometimes baffles even the advanced countries. Because in the face of many constraints it has been catering to the needs of different sections of society by telecasting programmes on all walks of life—health, education, sports, children and women welfare, environment, industry, agriculture, transport etc. It keeps the people of whole country a abreast with national and international affairs. The successful coverae of 1982 ASIAD at Delhi has put the Doordarshan in the glorious recognition of not only our countrymen but also of international bodies of developmental communications. ☐☐☐

Strategy to raise sugarcane production

Dr. S.S. Khanna
Dr. M.P. Gupta

India occupies an important place among the sugarcane producing countries. But the vicious cycle of fluctuation in the annual production of sugarcane, lament the authors, is causing great disruption in the sugar production. Here they emphasize on high yielding varieties of sugarcane with a fair degree of resistance to diseases and better crop management to improve its productivity.

SUGARCANE AND SUGAR INDUSTRY, besides providing income and employment to a large number of people, earn much needed foreign exchange for our country. It may, however, be mentioned that the sugar industry faces one of the major handicaps in terms of fluctuating acreage and production of sugarcane from time to time. Such fluctuations have often resulted in a kind of phenomenon of aggregate supply of sugarcane exceeding the aggregate demand in one year and falling short of demand in the following year. These wide swings not only make the entrepreneur hesistant in modernising sugar industry but also adversely affect the adoption of new sugarcane production technology by the farmers. The benefits of new technolgy can be derived only when it is efficiently utilised by individual growers suited for their local situations.

Sugarcane, an important cash crop in the world economy is being grown under wide range of conditions in tropical and sub-tropical regions. India is one of the most important country next to Brazil with respect to its sugarcane area and production. The other important sugarcane producing countries are Cuba, Pakistan, Mexico, Phillippines, China, Thailand, Argentina, United States of America, Australia and Columbia. These countries alongwith India and Brazil account for about 80 per cent and 78 per cent of the total sugarcane area and production of the world respectively. The area under sugarcane in the world during 1985 was 15.67 million hectares which produced about 941 million tonnes of cane. Of this, India accounted for about 5.30 per cent and 5.52 per cent of the area and production respectively.

About 25 million farmers are engaged in the cultivation of sugarcane in India, and an estimated 275 thousand skilled and unskilled workers are engaged in the manufacture of sugar, jaggery (gur) and khandsari. Sugarcane crop is valued at between Rs. 25-27 thousand million per annum depending upon production. The Central and State Governments collect huge amount as excise duty and cess tax and purchase tax every year. Sugarcane crop occupies less than 2 per cent of the gross cropped area of the country, and it is one of the most important crop next to grain crops, as it contributes about 7 per cent to the gross value of agricultural output. Thus, any improvement brought about in sugarcane and sugar production and productivity would reflect directly upon the standard of living of farmers, workers and consumers.

Trends in area, production and productivity

The area under sugarcane in India was 1.71 million hectares in 1950-51 which gradually increased to 2.84 million hectares in 1965-66. After that it showed a declining trend till 1971-72 and again increased to a peak level of 3.36 million hectares in 1982-83. In the year 1986-87, the area under sugarcane is reported to be 3.05 million hectares (Table 1) It would be seen that since 1950-51 the area under sugarcane has increased by about 80 per cent. Similarly, the production of sugarcane which was 57 million tonnes in 1950-51 increased to the peak level of 189 million tonnes in 1982-83, which recorded the peak hectarage under sugarcane. The productivity of sugarcane depicts a cyclical pattern and it has increased from 33.4 tonnes per hectare in 1950-51 to 59.7 tonnes per hectare in 1986-87.

The compound growth rates of area, production and yield of sugarcane during 1949-50 to 1985-86 were 1.90, 3.00 and 1.15 per cent per annum, respectively. Whereas during 1949-50 to 1964-65 these were 3.27, 4.26 and 1.12 per cent per annum, respectively. The growth rates in the post-green revolution period of 1967-68 to 1985-86 were of the order of 1.58, 2.70 and 1.11 per cent per annum, respectively.

Sugarcane being a predominantly irrigated crop, the impact of weather on its output is not very pronounced. The cyclical fluctuations in the production of sugarcane in India are primarly caused by acreage shifts in

Table-1

State wise Area, Production and Yield of Sugarcane

Area : '000 hectare
Production : '000 tonnes (Cane)
Yield : Kgs. per hectare

Region/State	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87
1	2	3	4	5	6	7	8	9	10	11
Sub Tropical Region										
Area	2088	2065	1697	1660	2029	2164	2034	1858	1793	2021
Production	97267	79024	63022	76265	92580	97691	93589	84735	87223	101712
Yield	46584	38268	37137	45943	45628	45144	46012	45605	48655	50326
Uttar Pradesh										
Area	1637	1634	1373	1363	1652	1783	1688	1543	1490	1688
Production	76819	62324	51228	64205	76440	81387	78244	70888	73037	85249
Yield	46941	38147	37317	47092	46280	45654	46553	45942	49018	50500
Bihar										
Area	139	131	120	111	124	130	128	112	119	112
Production	4958	3570	3914	3480	4180	4464	3885	3737	4001	3613
Yield	35796	27233	32724	31412	33822	34231	30444	33368	33622	32259
Punjab										
Area	116	110	77	71	106	104	84	79	78	97
Production	6520	6240	3930	3920	6120	6340	5530	4920	5050	6110
Yield	56207	56757	51039	55211	57736	60962	65833	62276	64744	62990
Haryana										
Area	196	190	127	115	147	147	134	124	106	124
Production	8970	6890	3950	4660	5840	5500	5030	5190	5150	6740
Yield	45835	36301	31102	40222	39728	37415	44254	41855	48585	54355
Tropical Region										
Area	803	752	677	803	930	953	863	876	852	835
Production	68255	61217	56497	69071	83259	80787	70116	75076	73691	70942
Yield	85000	81406	83452	86016	88857	84771	81247	86703	86492	84960
Maharashtra										
Area	246	244	222	256	297	326	294	293	265	245
Production	23320	22482	19819	23591	28780	31360	26549	26367	23706	20892
Yield	94795	92102	89276	92331	96868	96256	90305	89990	89354	85378
Gujarat										
Area	62	58	57	75	84	95	103	103	91	69
Production	3487	3287	3192	4435	5023	6695	7716	7582	6490	5566
Yield	56419	56763	56091	59215	59583	70330	75500	73612	71471	80432
Andhra Pradesh										
Area	169	142	114	132	180	170	142	138	133	136
Production	12847	9044	8422	10054	14662	12606	9743	9791	9675	8827
Yield	76020	63557	74141	75936	83258	74286	69099	70949	72632	65098
Tamil Nadu										
Area	167	154	149	183	201	175	152	170	191	212
Production	16995	15431	15393	18570	20208	15210	13258	17594	20005	21642
Yield	101521	99940	103035	101475	100388	87163	87234	103494	104682	102324
Karnataka										
Area	159	154	135	157	175	187	173	172	172	173
Production	11606	10973	9671	12421	14286	14916	128220	13392	13015	14015
Yield	72992	71390	71475	79367	81495	79722	74104	77860	80554	81012
All-India										
Area	3151	3088	2610	2667	3193	3358	3110	2953	2849	3055
Production	176966	151655	128833	154248	186358	189506	174076	170319	170648	182480
Yield	56160	49114	49358	57844	58359	56441	55978	57677	59889	59732

response to changes in cane prices realised by farmers from sugar factories, khandsari and gur manufacturing. Despite the fixation of statutory minimum price for cane and other regulations on the pricing and distribution of sugar, the farmer's realisations have tended to fluctuate widely. Further, the short-term remedies themselves have often become causes for subsequent disturbances in the cane economy.

The major sugarcane growing states are Uttar Pradesh Karnataka, Gujarat, Orissa and Kerala in the tropical belt. The climatic conditions in these two distinct belts influence considerably the productivity of sugarcane. Broadly, the productivity in the former belt is just half of that in the latter.

The cultivation of cane in the northern subtropical states, compared with the southern tropical ones, suffers from the following constraints:

(1) Climate with severe summer temperatures and low winter ones, restricting the growth of the crop. Out of 12 months it is only for 6-7 months in the fields :

(2) Inadequate irrigation facilities, resulting in moisture stress for the plant, particularly during the summer high temperatures.

(3) Lesser application of inputs in terms of fertilisers, insecticides, weedicides, fungicides etc. in view of the inadequate credit facilities and other supply system.

(4) More incidence of diseases (like red-rot) and pests, in view of the comparatively poorer standard of cultivation.

Programmes in Seventh Plan

The revised target of production for the Seventh Five Year Plan of sugarcane has been projected at 2060 lakh tonnes. The production target for the year 1987-88 was 1800 lakh tonnes which is likely to be achieved. The production target for the year 1988-89 is 1950 lakh tonnes, and the area to be covered would be 32 lakh hectares. For achieving this target, major emphasis will be to increase the productivity of sugarcane rather than increasing the area under the crop. The productivity of sugarcane is evisaged to be increased to 62 tonnes per ha.

The State Governments are being advised to adopt the following strategy for increasing sugarcane production .

(i) Production and distribution of quality seed suited for different agro-climatic zones of the country,
(ii) Increasing irrigation facilities,
(iii) Judicious use of fertiliser application;
(iv) Better management of ratoons;
(v) Larger coverage under plant protection;
(vi) Transfer of technology through various extension systems including demonstrations with companion crops,
(vii) Training of sugarcane development personnel; and
(viii) Greater participation of sugarcane factories in cane development.

Consumption trend

The consumption of sugar in the country during the last few years has shown a phenomenal increase. The domestic consumption of sugar increased from 57.1 lakh tonnes during 1981-82 to 75.7 lakh tonnes during 1983-84 and further to 80.5 lakh tonnes during 1983-84. It crossed the level of 83 lakh tonnes in 1985-86. During the year 1986-87, it increased to 87.51 lakh tonnes. It is estimated that during 1987-88 it would reach to a record level of about 91 lakh tonnes. Per capita consumption of sugar, gur and khandsari has increased from 19.5 kg per annum in 1974-75 to a peak level of 23.7 kg per annum in 1983-84, which declined to 21.8 kg per annum in 1986-87. It would be interesting to note that per capite consumption of sugar which was only 5.9 kg in 1974-75 has increased to 11.4 kg in 1986-87, whereas the per capita consumption of gur and khandsari which was 13.6 kg per annum in 1974-75 has declined to 10.4 kg per annum in 1986-87. The decline in per capita consumption of gur and khandsari in recent years has been mainly due to the fact that sugar is easily available at reasonable rates as compared to the high level of prices prevailing for gur and khandsari (Table 2).

Table 2

Per Capita Consumption of Sugar, Gur and Khandsari

Season	Estimated per capita consumption Kg/Annum		
	Sugar	Gur and Khandsari	Total
1974-75	5 9	13.6	19.5
1975-76	6 1	13 7	19.8
1976 77	6 1	14 2	20 3
1977-78	7 1	14 4	21 5
1978-79	9 6	11.8	21.4
1979-80	7 8	11.3	19 1
1980-81	7 3	12 6	19 9
1981-82	8 2	11 5	19.7
1982-83*	9 1	12 2	21.3
1983-84*	10 5	13 2	23 7
1984-85*	10 9	12 4	23.3
1985-86*	11 1	11.0	22.1
1986-87*	11 4	10.4	21.8

*Provisional

Ratoon movement

Immediately after the harvest the ratioon operations should begin, particularly when the temperatures are ideal for ratooning. Stubble shaving is done with a sharp instrument as close to the ground as possible. It helps in better sprouting of the ratoon crop from the bottom. Irrigation is given, and at the current moisture level the ridges are broken, fertiliser (75 kg N/ha) is supplied and earthed upagain The entire amount of phosphorous (50 Kg P_2O_5/ha) is placed along the rows. Nitrogen is applied at best in two more stages of the growth period. Ratoons come up very well if the entire amount of fertiliser is applied very early after harvest, parvest. preferably within 60-70 days.

A ratoon crop generally needs a higher level of manuring particularly nitrongenous fertiliser (225 Kg N/ha) than the planted crop (150 kg N/ha) Since the soil would have been depleted of nutrients the physical conditions of the soil are an important factor. Besides, ratoons are less efficient utilisers of applied nitrongen. The fertiliser recommendations vary, and based on the soil conditions 20-50 per cent additional nitrogen is recommended.

The general impression is that ratoons are more susceptible to diseases and pests compared with the planted crop. It may be true that continuous ratooning results in a little higher incidence of disease and pest. However, if proper sanitation of the crop is maintained with optimum fertiliser and irrigation requirements the ratoon crop would be as good as normal one. This finds proof in countries like Mauritius and Cuba where 7-8 ratoons are the normal feature, and the last ratoon crop is as satisfactorily good as the first ratioon in terms of yield and resistance to diseases and pests.

In India where normally the ratoon crop is not well managed and taken practically as a free crop with little

inputs, the ratoon suffers more from diseases and pests, and hence more than 2 ratoons are not recommended. Considering that nearly 50% of the crop is under ratoons, there is need to educate the grower on the efficient management of ratoon crop. The saving in preparatory cultivation, cost of seed and planting charges, stubble shaving, application o fertilisers in the recommended doses in time, optimum irrigation of the crop and normal precautions against diseases and pests go with good ratoon management. It is well known that a ratoon crop matures earlier by 3-4 weeks.

Technology

The technology for sugarcane cultivation in various states is well known and mainly consists of the following items:

1. Right sugarcane variety;
2. Healthy and vigorous well-treated seed material;
3. Adequate and timely application of fertilisers and irrigation;
4. Suitable cultural operations;
5. Plant protection cover at various stages of crop growth.

The standard of sugarcane cultivation, in general, still remains far below the expected breakthrough; obviously the reasons being (i) lack of required thrust by extension agencies on improved technology at field level (2) non-adoption of such technology by farmers either due to scarce and/or uneconomical and difficult availability of various inputs; and (3) inter-related economics of growing sugarcane vis-a-vis other competing crops.

There are large areas of sugarcane, especially in the eastern U.P. and Bihar, which suffer from floods and drought, leading to poor cane crops. In such problem areas, the pre-requisite for improving the crop production is to improve drainage and proper irrigation facilities. In the absence of such arrangements, no developmental efforts are likely to bear the desired fruits.

The vicious cycle of fluctuation in the annual production in sugarcane from year to year is perhaps the single factor, causing greatest disruption in the sugar production.

The crux of increasing productivity of sugarcane rests on need-based development programme with effective participation of sugar mills, gur and khandsari manufacturers and cane growers, regulation of cane supplies to sugar mills and gur and khandsari manufacture, maintenance of rational price structure for cane supplied for sugar, gur and khandsari manufacture, proper price incentive for these sweetening agents; interim sugarcane development in non-factory areas, and tackling the problems of floods, water logging and drought.

Irrigation

Sugarcane requires lot of water for its normal growth. In areas where rainfall is not adequate, irrigation facilities are must to supplement the water requirement of the crop at critical stages of growth. Considerable work on water requirement of this crop has been done at different Sugarcane Research Stations of the country. The Irrigation Commission has etimated that the consumption of water of sugarcane ranges from 1400 to 2500 mm in different states. A water requirement of 1400 mm is estimated for the State of Bihar, while that in Maharashtra is estimated at 2500 mm. In northern India, in general, the amount of irrigation required is less due to the fact that the crop sustains more rain water during part of its growth period and the need for water is less on account of low aridity. Time from planting to monsoon setting in is the period of irrigation requirement. Whenever there is enough water for only one irrigation, it should be given at the time of third order of tillering. In case of two available irrigations the second and third order of tillerings are the most responsive stages. Three available irrigations may best be utilised by giving them at the first, second and third order of tillerings.

Fertiliser

A good crop of sugarcane needs 150 kg N and 50 kg P_2O_5+100 kg K_2O per hectare. Among the major nutrients response to nitrogen is universal. The use of potash and phosphate is guided by soil test values. As a general rule, the nitrogen requirement has been estimated to range between 1 and 1.25 kg for 1 tonne of cane. In the case of ratoon crop during the gap filling this rate may be stepped up by 20 per cent. Fertiliser nitrogen should be applied early in 2-3 split and should be completed before the close of tillering phase. Phosphate and potash are applied as basal dose. Organics (compost, FYM) are generally applied one month before planting. Top dressed fertiliser nitrogen should be intimately mixed with soil immediately before irrigation. An application of 25 kg zinc sulphate per hectare, if sugarcane is being planted in a light textured sloil, is recommended.

Plant Protection

There is an urgent need to save sugarcane crop from ever-increasing diseases and pests menace. The most common diseases which affect this crop are red rot, smut, wilt, grassy shoot disease. This important pests which attack sugarcane are top borer, shoot borer, stem borer, termites, white fly and phyrilla. Effective plant protection chemicals are available for controlling the diseases and pests prevalent on this crop. Preventive measures by way of choosing resistant varieties, chemical and mechanical control and good agronomic practices go a long way in minimising the pests and diseases attack. In order to enable the farmers to take timely plant protection measures to save this crop, an efficient diseases forecasting system is needed.

Recommended varieties

In a country where input intensive agriculture cannot be taken on large scale, varieties which offer built-in package are a great lever for improvement in

Table-3

Recommended Sugarcane Varieties for different States

Name of State	*Varieties recommended for commercial cultivation*	
	Early ripening	*Mid-and late ripening*
1. Andhra Pradesh	'Co.A. 7701, 'Co.A. 8201' 'Co. 997', 'Co. 52727'	'Co.A. 7602', 'Co. 975' 'Co.7219', 'Co. 62175', 'Co.419'
2. Assam	'Co.1008'	'Co. 6315', Co 977', 'Co.740', 'Co. 916', Co. 11328
3. Bihar	'B.0.43', 'BO.75' 'B.0.90', 'B.0.99' 'Co. P-2'	'B.O.104', 'Co.S 767', 'Co. P-T., 'B.O.84', 'B.O.88', 'B.O.89' 'B.091 B.O.91' 'B.O.106', 'B.O.108', 'Co. 1148', 'Co.1158'.
4. Gujarat	'Co.C.671', 'Co.6806'	'Co.419', 'Co.6304' 'Co. 62175'
5. Haryana	'Co. 7314', 'CoJ.64' 'Co.7717'	'Co. 975', 'Co.1158' 'Co.1148'
6. Karnataka	'Co. 6415'	'Co. 449', Co. 62175' 'Co.419', 'Co.740', 'B.37172'.
7. Kerala	'Co 671', 'Co. 449'	'Co. 419', 'Co.6304', 'Co.997',
8. Madhya Pradesh	'Co.775', 'Co.1169'	'Co.1307', 'Co.1305' 'Co.6304', 'Co.7318' 'Co.853', 'Co.419'.
9 Maharashtra	'Co.419', 'Co.775' 'Co.7219' (Sanjivani) (Sampada)	'Co.62175, Co.740' 'Co.7125'
10 Orissa	'Co.527', 'Co.997' 'Co.C.671'.	'Co.975', 'Co.6304', 'Co.419', 'Co.740', 'Co.62175'
11. Punjab	'Co.J.64'	'Co J.67', 'Co.1148'
12 Rajasthan	'Co.449', 'Co.997'.	'Co.527', 'Co.1007, 'Co.419', 'Co.1111', 'Co. 1253'.
13. Tamil Nadu	'Co 418', 'Co.853', 'Co.C 671', 'Co.C.771', 'Co.C.772' 'Co. C.773', 'Co C 8001,'	'Co.658', 'Co 6304', 'Co 740', 'Co.C.776', 'Co C 774', 'Co.C 775', 'Co.C. 8001', 'Co 62175', 'Co.C 8201'.
14. Uttar Pradesh	'Co 395', 'Co S.687', 'Co J.64'.	'Co.1148', 'Co.S.758' 'Co.S 767', 'Co. 802', 'Co 7918', 'Co, 837', 'B 0 80', B.0 91', 'Co.8118', 'U P.3' 'Co.62399, U.PI
15 West Bengal	'Co.622', 'Co 997' 'Co.62010', 'Co.J 64'	'Co 527', 'Co.842', 'Co.1008', 'Co.6311', 'Co.1148, 'B.O.17', 'B O.70', 'Co.1158', 'Co.419', 'Co. 1132 'Co.1232'

productivity. In fact in sugarcane a quantum jump in yield was achieved much earlier (1936-40) compared to cereals (1968). This was possible with the exploitation of inter specific hybrid vigour. Having achieved this, subsequent improvements in yield potential are possible only marginally through adeptability to stress conditions like drought, waterlogging, frost etc. Notable success has been achieved in developing varieties suited to these conditions. However, improvement in quality is rather slow. Breeding for resistance to disease and pests has been initiated in a systematic way.

The recommended sugarcane varieties for different States are presented in Table 3.

Strategy

Various approaches and strategy for improving sugarcane and sugar productivity are given below :

1. Development of early-rich sugar and high yielding varieties possessing a fair degree of resistance to major diseases and insect pests.
2. Development of varieties possessing resistance to abiotic stresses such as waterlogging, low and high temperature, drought and salinity.
3. Development of varieties for improved jaggery productivity.
4. Development of better technology for management of crop under various stress situation.

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Nehru, a true democrat, socialist

Sheik Ahmed Hussain
Om Prakash Kajipet

Democratic socialism was the brainchild of Jawaharlal Nehru, the architect of modern India. To achieve it, he launched economic planning in India. The seeds of present day policies of mixed economy, were sown during his tenure as Prime Minister. The authors say, "Nehru, the great visionary, gave an economic system to India which is being followed even today. He was very much ahead of his time, but unfortunately, he did not live long to see the implementation of his ideas. The seeds of the economic fruits which India is reaping today were sown by none else than Jawaharlal Nehru".

ECONOMIC PLANNING IN INDIA is the gift to the motherland by its great son Pandit Jawaharlal Nehru who is most aptly called the architect of modern India.

Planning in India was a historical necessity. It was taken to be an answer to the need for rapid development for eliminating mass poverty and growing unemployment and for accelerating an institutional change which would make the economy more dynamic and progressive for social as well as economic ends. Market mechanism was deemed to be a major cause of India's economic ills suffered during the British rule. By subjecting the Indian economy to the process of planning, Nehru as the Chairman of the National Planning Committee set up in the year 1938, thought that the market mechanism be geared to the achievement of more comprehensive goals than it is capable of.

Democratic socialism

Impressed by the achievement of socialist planning Nehru accepted Socialism as the guiding philosophy of India because of poverty in India as well as the developments in Socialism all over the world. It was in the twenties that Nehru grew conscious of the poor when he was drawn into the Kisan movement of Faizabad and Rai Bareilli. At one place he records "I spoke to them, man to man and told them what I had in my mind and in my heart." At another place he recorded (1937) "I gazed at the millions of friendly eyes that looked at me and I tried to understand what lay behind them. The more I saw of India the more I felt how little I knew of her infinite charm and variety."

By the close of twenties, Nehru become a firm believer of Socialism. In the course of his address to the Indian National Congress which met at Lahore in December 1929, he remarked. "I must frankly confess that I am a Socialist and a republican and I am no believer in kings of industry, who have greater power over the lives and fortunes of men than even the kings of old and whose methods are as predatory as those of the feudal aristocracy."

But Nehru was also aware that Socialism is deviod of democratic values and for the proper development of human personality and the growth of just society democratic values are indispensable. Therefore he combined the socialist philosopy with the democratic values of capitalist society which is popularly described as the democratic socialism.

"In the society based on the principle of democratic socialism, socialism and democracy are the means for the creation of a society in which exploitation of one class by another is abolished so as to raise level of living of its people and in which the individual possesses an unfettered right to self expression." The new pattern of society was described by the Congress at the Avadi Session in 1955 as the "Socialistic pattern of Society".

The main features of socialistic pattern of society are (1) Removal of poverty (2) Reduction of inequalities of income and wealth (3) Provision of equal opportunities to all (4) Mixed economy (5) Check on concentration of economic power and growth of monopolistic tendencies (6) Social gain in place of private profits and (7) Democratic values.

Evaluating plans

The following lines evaluate as to how far the above said features of socialistic pattern of society could be traced during Nehru Era, i.e., the period of first three Five year Plans.

The First Five-Year Plan (1951-52 to 1955-56) was aimed at an all round development of the whole

economy. The main objective of the plan was to "raise the standard of living of the people and to open out to them opportunities for richer and more varied life." With an overall expenditure of about Rs. 2,000 crore in public sector the plan laid emphasis on agriculture, irrigation, power and transport with a view to creating more rapid economic and industrial advance in future. It also initiated some policies about social change and institutional reforms.

The national income during the first plan increased by about 18 percent against original expectation of 11 per cent. The per capita income also increased by about 11 per cent and there was an increase of 9 per cent in consumption expenditure per head.

During the Second Plan the national income increased by 20 per cent over the base year 1955-56. The overall increase in national income during the first two Five-year Plans was 42 per cent and per capita income rose by about 16 per cent.

The national income grew at the rate of 4.5 per cent per annum during the first four years of Third Five-Year Plan but registered a decline of 5.6 per cent in the fifth year because of Indo-Pakistan war.

The increase in national income though was below the targeted increase in the Five-year Plans but it grew considerably as compared to the rate of growth of national income during pre-independence period. It was just 1.2 per cent per annum between 1900-1946.

The growth in national income and per capita income indicate the improved standard of living of the people. The indicators of standard of living e.g. life expectancy rate, urbanisation, literacy rate etc. also have shown an upward trend.

Reducing inequalities

India lives in villages and a major part of its population derives livelihood from agriculture. The reduction in inequalities of income and wealth could be best understood if the per capita income in agricultural sector increases and equals that of industrial sector. As we observe that during the first Five-Year Plans period there has not been any considerable increase in the per capita income of agricultural sector. It was just about 14 per cent against a massive increase of 68 per cent in the per capita income of industrial sector, and cost of living increased by 23 per cent. There is hardly any improvement in the living standard of agricultural population. On the other hand the distribution of income tilted more towards the propertied class and growth of public sector had hardly made any difference to the situation. "It is wrong to think that, either in the production of wealth or its distribution our public undertakings differ vitally from those which are managed by public limited companies. In the former the contractors who build and those who supply machinery and materials and the selling agencies are able to appropriate as much share of income produced as in the latter. while public limited companies distribute profits to share holders as dividends. The capital of Public Undertakings is derived from loan taken by the Government on which interest has to be paid. Thus there is not much difference in the net economic results to the community. There is, however, one difference which is at present very conspicuous. In the case of public undertakings, corruption, i.e., illegitimate self-enrichment of those who are managing the undertakings, is considered to be wrong and illegal, while it is considered to be an index of skill and ability in the case of private enterprises. Admitting the fact that gulf between the rich and the poor has widened instead of being narrowed down the Fourth Plan mentions— "Another area where our effort so far has been feeble and halting is in narrowing the disparities in income and property ownership."

But in a study of international comparisons of inequality of incomes by the World Bank and the Institute of Development Studies at Sussex University (England) it was revealed that India had moderate inequality of incomes in the year 1964. The socialist countries have the highest equality while the capitalist countries had higher inequalities. Thus India could achieve at least moderate equality of incomes.

Mixed economy

Mixed economy is a combination of the merits of the two economic system— Socialism and Capitalism. The public sector is given the main responsibility of developing the economy while the private sector is also given an inportant role to play in economic development of the country. The faith in this economic system has been given shape through the Industrial Policy Resolution of 1948. And even till date we have faith in mixed economy. Of late the rest of the world is following our example.

In order to study the concentration of economic power for the period 1951 to 1958, the Monopoly Enquiry Commission was appointed in the year 1964, the ultimate outcome of which is the passing of Monopoly and Restrictive Trade Practices Act of 1970. And also the Industrial Licensing Policy and the nationalisation are some of the ideas which were actually originated during Nehru era but implemented in the post-Nehru era.

The private profit is replaced by social gain by bringing the core and basic industries and the public utilities under the purview of public sector.

The democratic values are safeguarded and provision of equal opportunity to all is assured by the adoption of Indian Constitution on 26th November, 1949 and bringing it into effect from the 26th January, 1950.

Right choice

Nehru was firm believer in Socialism but he had his love for democracy also. Socialism demanded the centralisation of all the means of production and distribution and vesting the ownership only in the hands of the State to wage the marathon war against poverty and the people have to sacrifice all non-economic values for waging the war successfully. Examples are Soviet

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Nehru—champion of global peace

V. Longer

In this article the author reviews Jawaharlal Nehru's contribution as architect of India's foreign and defence policies and as one of the fathers of the non-alignment movement. He particularly highlights efforts of Nehru for good-neighbourly relations and promotion of world peace.

JAWAHARLAL NEHRU, THE FIRST PRIME MINISTER of India was the main architect of the foreign and defence policies of the country. Indeed, these policies were rooted in the soil of India. But, the seedlings sprouted, as they were planted by Nehru, drawing sustenance from the histroy, culture and the social milieu of the nation.

Nehru grew with India. In the years that passed by, throughout the world-in the remotest regions of the world-India was recognized by the name of Nehru. India's voice was heard throughout the world; Nehru's voice reverberated in the four corners of the world.

Nehru, sensitive, human and overflowing with compassion, was the most charismatic leader of men, magnetic, adorable; his intellect was searching and his perceptions were acute. Nehru had the amazing capacity to comprehend and absorb variegated thoughts which were then synthesised by him.

Expanding friendship

Young Nehru, brimming with vivacity and ideals, made his debut on the international stage at Brussels where he represented the Indian National Congress at the International Congress against Imperialism, in February 1927. What he saw and heard there left indelible impressions on his youthful mind. Those thoughts and opinions remained with him throughout his life. A bhorrence of imperialism and colonialism; the desire to see all nations free; solidarity for the Asian nations and an unfailing friendship for China, recalling the India-China association dating back to 3,000 years.

After Brussels, Nehru went to Moscow for four days in November 1927. He came back full of "the mightiest experiment in history" which had been launched by Russia. The socialist in Nehru who reached out to the common man was greatly excited by what he saw there.

The following year, the All India Congress Committee opened its Foreign Department which was directed mainly by Nehru. The intellectual sweep of Nehru was wide. He had studied and understood the history of mankind. This flavoured his thoughts. His discernment of world affairs was keen.

Clear vision of defence

Nehru had expounded his views on defence, in two articles which he wrote for "Young India" in 1931 Nehru was convinced of the absence of any threat to India. Who would want to threaten India particularly as India wanted to live in peace with no extraterritorial ambitions? Nevertheless, Nehru felt, the nation had to prepare itself for all eventualities and refurbish and reconstruct its defence forces. The Indian Army, though capable and competent, had to be reorganised into "a truly national Army" The Armed Forces had to be equipped with the latest scientific equipment to become a "highly efficient, mechanised defence force" Nehru was clear that the British personnel of the Indian armed forces had to leave; India with its manpower resources could fill the gap.

When in 1946, India stood on the threshold of independence, Nehru, speaking in Bombay on January 8, was explicit that if India's security was threatened, the nation would "inevitably" defend itself in every way possible. When asked whether India would acquire atomic bombs, Nehru clarified that India would develop atomic power for peaceful uses. In fact, as early as April 1954, India urged the UN for a test ban on nuclear weapons. India joined the partial Nuclear Test Ban Treaty in 1963. Nehru stood for disarmament; India readily joined the UN Special Disarmament Committee.

Taking over as the Vice-President of the Interim Government, Nehru spoke to the nation on September 7, 1946, underlining the fact that India's policy was to be free and independent, "not merely as a satellite of another nation". The accent was on peace: India wanted to be friendly with all nations" in furtherance of world peace and freedom" and "keep away from the power politics of groups"

A new feeling was astir in Asia and the people of Asia

were coming closer together with India occupying a pivotal position in "western, southern and south-east Asia". A closer union between India and South-East Asia on one side and Afghanistan, Iran and the Arab world on the other, had to be forged. India was to back the freedom struggles in Indonesia and in North and East Africa. With the United Kingdom and the Commonwealth there were to be friendly relations.

India decided to stay in the Commonwealth. Nehru was greatly respected in the Commonwealth. All the heads of state in the Commonwealth looked up to Nehru for his advice.

Greetings were sent by the Interim Government to the United States. Acting as Nehru's personal envoy, V.K. Krishna Menon, met the UN Soviet representative, M.V. Molotov and conveyed the Indian Government's earnest desire for friendly relations with the Soviet Union. India sought the help of Russia. It was hoped that with China, "that mighty country with a mighty past", India's friedship will endure and grow. Towards the United Nations, India's attitude was of whole hearted cooperation.

When India hosted the first Asian Relations Conference at New Delhi in March-April 1947, Nehru spoke of Asia which "after a long period of quiescence has suddenly become important again in world affairs". Two years later followed an emergency Conference of Asian States for Indonesian independence. India initiated an Afro-Asian bloc in the United Nations. But, the glorious climax came in 1955 when Nehru's dream of "Asia reborn, proud and free" came true at the historic Afro-Asian Conference at Bandung.

Bandung, mirroring the resurgence of Asia, touched the meridian of Nehru's political vision. Nehru was the main moving spirit behind the six-day conference of 29 States of Asia, Africa and West Asia. It was at the instance of Nehru that China was invited to the Conference.

Nehru bestrode the world like a colossus. His sensitive mind was quick to all situations in the world: Civil war in Spain, the Palestinian cause, wars in Korea and the erstwhile States of Indo-China, the progress of Viet Minh, events in Hungary, racial discrimination in South Africa, the Cyprus question, crises in Burma and Malaya, advancements in Ethiopia, Sudan and Nigeria and the defence of the Indian Ocean.

The leaders of the world paid heed to what Nehru said. Nehru's voice was the voice of Asia, demanding recognition and seeking freedom and equality. Nehru was full of life, buoyant and charmingly impetuous. He had the vision of one world.

Free India was born in an atmosphere of Cold War and Prime Minister Nehru's greatest contribution to international affairs as also to world peace was the theory and practice of non-alignment. India, opposed to military deterrence, had decided to stay away from warring blocs, maintaining an independent approach in judging various international problems. Deeply embedded in this policy of non-alignment was the security of India. If India remained friendly with all countries and allied itself with no rival military groups, the security of India would not be disturbed.

Messiah of non-alignment

Nehru was the leader of Asia and the founding father of non-alignment. The main concept of non-alignment which could serve as a golden bridge in a bi-polar world and grant dignity and independence of action to the Third World, had germinated in his mind some years before independence. In course of time Nehru was identified with the movement. He was accepted as the undisputed leader of the non-aligned world.

Nehru spoke of non-alignment as a "positive policy for peace". Together with President Gamal Nasser of Egypt who admired Nehru as an elder statesman and Marshal Tito of Yugoslavia, Nehru established non-alignment as a world movement. This dovetailed excellently with anti-colonialism, equality among races, mediation for relaxing international tensions, support for Asia and the Arab cause, and peaceful co-existence. These were the main strands of India's foreign policy. They were explained by Nehru when speaking at the UN General Assembly in Paris on November 3,1948.

Nehru wanted peace for development in India. Development he considered essential for defence saying: "Defence consists of armed forces plus their equipement etc., plus the industrial production of the country, plus the economy of the country, plus the morale of the people, plus the international relations or international positions."

Nehru looked upon several national problems in the context of international relations. India could not live and grow in isolation. Nehru kept India's windown wide open to the world. There was a ceaseless flow of world leaders to India. Nehru was the lodestone which attracted them. Nehru had made India the cynosure of all eyes.

Non-alignment and peaceful co-existence dominated the fifties when India perceived a threat only from Pakistan even though Nehru had offered a "No-War pact" with Pakistan. Post-Partition problems and Kashmir had stood in the way. The Pakistan-US link-up made it worse. India-US relations too had soured especially over the US military aid to Pakistan and Pakistan's entry into the US-sponsored CENTO and SEATO which Nehru considered "disturbing".

Friend of neighbours

1950 was crucial year. Chinese troops had entered Tibet and the war in Korea had brought the United States in confrontation with China and Russia. Indian mediation helped to restore peace in Korea. In the process, India's friendship with USSR and China was cemented. This countered the threat from US-Pakistan military alliances.

The India-China Treaty on Tibet (1954) ensured the security of India and promoted the five principles of "Panchsheel". The security of the northern borders was

the primary concern of the treaties, bearing security contents, which had been concluded with Nepal, Bhutan and Sikkim. Defence on the borders were shored up. Roads were to be built in the northern border areas. Finally, as friendship with the Soviet Union gained strength, rising high in 1955 when Prime Minister Nehru visited Russia and Marshal Bulganin and First Secretary Khrushchev came to India, Nehru had succeeded in winning over both Russia and China. Friendship with the Soviet Union and China was considered essential for the security of India.

Unfortunately, the political scenario was heavily overcast in 1959 when China and Russia were falling apart. Tibet was in revolt and two letters from Prime Minister Chou-En-Lai in January and September that year had questioned the entire Sino-Indian boundary. Prime Minister Nehru presented to the Parliament a White Paper on India-China relations (1954-59). He continued to negotiate with China as also augment the defences. A special "Task Force" was created. Nehru never lost faith in peaceful negotiations; he hoped they would succeed. But, the unhappy events of October-November 1962 could not be averted.

Nehru was sad. But, he was convinced that non-alignment was "as good during war as it was in peace time." He wanted the country to give "more attention to strengthening our armed forces ..." New defence and training plans were prepared, new arms were to be obtained, new Mountain Divisions were to be raised and the armed forces were to be augmented.

An Indian technical delegation and subsequently a military mission were sent to Moscow in 1960. Agreements to purchase Russian helicopters, transport planes and the MIG-21 fighter planes were concluded. The bulk of the Soviet supplies came to India after 1962. Six MIG-21s arrived in India in 1964. Their assembly and their eventual indigenous production were established in India. This set the tone for the Indo-Soviet military co-operation which has grown.

Meanwhile, Pakistan with its pronounced anti-India bias had seen its opportunity and had been wooing China since 1960. President Ayub Khan had suggested to Prime Minister Nehru a joint India-Pakistan defence. Nehru, opposed to military alliances, turned down the proposal explaining that if the foreign plicies of India and Pakistan did not coincide, how could their defence policies coalesce.

Not surprisingly, the India-Pakistan talks of 1962-63 collapsed. Pakistan had announced that it was entering into a border agreement with China. This was inspite of the fact that Pakistan had no common border with China and it eventually bartered away 2,000 sq. miles of Indian territory in Pak-Occupied Kashmir to China.

The threat on two fronts which had been looming large became distinct. Conscious of this, Nehru was making various diplomatic efforts to combat the dangers. But, the inexorable hands of death robbed the people of India of their beloved and illustrious Prime Minister. A great son of India, one of the brightest stars in the international firmament, had passed away on May 27, 1964. □□□

(Courtesy: PIB Feature Service)

(Contd. from page 25)

5. Improvement of technology of crop management under normal conditions, especially for changing cropping system and also for new released varieties.
6. Development of better technology for management of crop for protection against insects, pests, diseases and weeds.
7. Development of suitable agro-technology for the management of ratoons of winter and late harvested plant crop.
8. Increasing efficiency of biological nitrogen fixation and its utility in sugarcane cultivation.
9. Research on sugarcane based systems to find out the most economical and beneficial system for various agro-ecological situtations prevailing in the States.
10. Improvement of technology for obtaining higher sugar per unit time for checking quality deterioration in late harvest.
11. Use of micro-nutrients to correct iron, manganese and zinc deficiency depending on soil and deficiency symptoms.
12. Soil survey of each sugar factory or a group of selected sugar factories for recommending suitable nutrients application in terms of time and dose and also rectification of other edaphic factors like salinity or alkalinity.
13. Rapid multiplication and supply of high quality of healthy nucelus and of improved varieties.
14. Rapid dissemination of knowledge on advances in sugarcane production technology. □□□

Autonomous status for 500 colleges during VII plan

About 500 colleges are proposed to be developed as autonomous colleges by the end of the VII plan. The University Grants Commission has formulated detailed guidelines for implementation of this scheme. Every university has been requested to select suitable colleges with the approval of the concerned State Governments. The autonomous status has to be conferred by the university concerned in accordance with the provisions of its Act and Statutes. According to the existing provisions in the Delhi University Act, only those colleges conducting courses of study in Medicine, Technology, Music or Fine Arts can be given autonomous status. A Bill to amend this provision to enable the university to confer autonomous status on any college affiliated to it is now before Parliament. It will be for the university to confer autonomous status on its colleges after this amendment becomes effective. □

RESERVED FOR READERS

I read with interest the article, 'Secularism-need for a movement' by Shri S.M.H. Burney, in Yojana, August 15, 1988. However it is very disappointing to note that such an excellent write up and intellectual discussion should have been marred by some sort of a personal/professional bias as evident from the following sentences/part of sentence.

1. One can understand the growth of fundamentalism amongst Muslims because the minorities wish to preserve their identity.
2. In a multi-religious society where large sections of population, including those belonging to religious minorities, suffer from economic privations, the question of eliminating poverty with a view to promoting the health of society becomes a matter of crucial importance.
3. What is important is to ensure that the minorities get a fair share of the economic cake.

Sir, for a moment, I request you to view your article again after deleting the above underlined sentences and judge for yourself whether what remains is a more forceful and secular presentation or not?

You seem to attribute the growth of Muslim fundamentalism to their minority status. But the fact is that every Muslim, literate or otherwise, feels in his heart of hearts that he is more secure and his identity better preserved in India and with his Hindu brothern than in any other country. The reason for Muslim fundamentalism is purely political. And if centuries of co-existence with their Hindu brothern has not taught the Muslims the wisdom of tolerance and removed the fear of the majority from their minds, I wonder if ever a day would come when they would not see around them with suspicion. While talking of economic privations in a multi-religious society of India, I doubt if there is need to give an extra emphasis on religious minorities. Poverty knows no religion. Perhaps you want to reason out that they can be easily goaded to fundamentalism. But so can others be.. Actually, here the role of political leaders, having petty personal gains in mind, comes in. It is they who should be stopped from doing so, which you have already pointed out. Not that even when dealing with poverty the question of minority-majority should come in.

Perhaps it is ridiculous to expect from the Chairman of Minorities Commission not to advocate for minority communities. But is it not true that they are already getting more than their 'fair share'?

In fact the very division of 'minority-majority' goes against secularism. I don't say that they should not be taken care of but not at the cost of others and not to the extent that a person from the so-called majority community should lament "Alas ! I would have belonged to a minority community."

So long as the government policies are influenced by political reasons, the dream of secularism in India would remain a dream.

Sir, I sincerely hope a reply from you and I also hope you to enlighten me of any error in my thinking.

Ravi Ranjan
Shivpuri
Patna

I read the August 15, Special Independence issue of Yojana with deep interest. It has three distinguishing characteristics. First, I wish to congratulate you and your colleagues on the choice of the subject. Indeed, in ultimate anlaysis, Indian Secularism is not merely a peculiarly Indian phenomenon but also a part of the Indian view of life. Second, I was deeply moved by your editorial, at once thought-provoking and refreshingly frank. Third, the contributors-they certainly constitute a section of the WHO'S WHO of contemporary India-have addressed themselves to a variety of issues derived from the philosophy of modern India's Secularism.

Viewed in historical perspective, Indian secularism is a product of India's cultural consciousness as it developed over the centuries. For Ancient India was a confluence of cultures and creeds. Not surprisingly it produced Asoka and Kalidasa. Similarly, Islam was Indianized in Medieval India. And this process of the Indianization of Islam had contributed to the achievements of Akbar and Amir Khusro. Actually it was a continuing process. For, the various types of response and resistance to the European Renaissance in the modern setting produced a galaxy of men like Raja Ram Mohun Roy, Rabindranath Tagore, Mahatma Gandhi, Pandit Nehru and Maulana Azad. For these great men contributed not only to the making of Modern India, but also gave us the distinctive signature of India's Secularism. And may I congratulate you once again for cherishing this signature in the pages of the Special Independence August 15, 1988 issue of Yojana? Indeed the readers of Yojana could not have received a more precious gift—the signature of Indian Secularism—on India's Independence Day.

A. Ranganathan
Director
Tamil Nadu Warehousing Corporation
Madras.

BOOK REVIEW

District Administration/The Dynamics of Discord Anil Chaturvedi; Sage Publications, New Delhi, 1988. Pages 185 Rs. 150

If any one wants to know why programmes do not get implemented in the field as envisaged, here is an answer-dynamics of discord between departments administering the programmes. Any programme in the field connected with the delivery of public services involves inter-organisational relationship and co-ordination. Inter-organisational conflicts are inherent in any administration that is based on power structure conscious of its domain, boundary and 'power-field'. How to achieve this ? There is no answer except perhaps through human resource development, motivation and further training.

Chaturvedi examines in this book how different departments assert, accept, admit or deny inter-dependence. A total of 212 respondents from two drought-prone and two less drought-prone districts from Uttar Pradesh state were interviewed. Of them, 74 belonged to Administration, 65 to Irrigation, 48 to Public Works Department and 25 to Police departments. Interviews were held at three level functionaries from the top. Three sets of comparisons were made, namely, differences between the perceptions of the departments, differences within the departments and reciprocal perceptions between different departmens, as for example, administration's perception of the police department and vice versa.

There are three elements in inter-organisational transactions— routineness, standardisation and formalisation. Because of unequal power distribution amongst transacting organisations, a dominance-dependent relationship is created. The department that masters more resources dominates. If domains overlap, conflicts arise.

Since the district is the locus of all developmental activities, power is finally exercised at the district level officers. The Administrative department of which the Collector or the District Magistrate is the Head is perceived as greater in power and status. Weakest relationship was found between the PWD and other departments. Personality conflict is the main cause of dispute, territorial overlap being minor.

An important conclusion drawn by the author is that in the drought-prone districts, orientation of the departments shifted significantly towards increased acceptance of their inter-dependence. The departments showed a positive shift in their approach towards each other and towards the need for co-operation when environment pressures compel them to interact.

The book is a result of hard work carried over some years. Chaturvedi has firm grip over the subject and indeed he has contributed immensely towards inter-organisational research in India—a field developed by Aldrich (1971) and Hall and Clark (1974). Chaturvedi is an analyst, not a reformer. As a social scientist, he has analysed the field; he suggests no prescriptions. Perhaps he may now extend his research to examining inter-organisational relationship of different departments in concrete terms taking up a programme in the field such as the IRDP (Integrated Rural Development Programme)or the ICDS (Integrated Child Development Services Programme) and show how different actors in the 'action set' behave in the delivery of services. This book will be widely read in the context of current emphasis on district administration strengthening and will make its impact for a long time to come.

S.M. Shah

Planning at the Grass Roots, by Kamta Prasad published in 1988 by Sterling Publishers Pvt. Ltd. L-10, Green Park Extn. New Delhi-110016. Pages 195, Price Rs. 125/-

Highlighting the rationale and requirements of decentralised or grassroots level planning in India with adequate involvement of people, the author in this volume attempts to review systematically the efforts made so far in India to decentralise planning process. He evaluates the current methodology of planning followed at the block and district level and examines the organisational set up for planning at the grassroots.

Further, he analyses the role played by various non-governmental agencies in this regard and suggests measures to widen their scope and increase their effectiveness. Author also makes valuable suggestions with regard to methodology of planning and formulation of organisational structure for the plan implementation at the block and district levels.

The above study is based not only on secondary sources of information, but also on detailed study of the planning process at grassroot level made by the author in two states, Gujarat and Bihar. First chapter of the book deals with rationale and requirement of micro-level planning in India. It favours a system of multi-level planning working through the iterative process and spells out the conditions necessary for its success. Chapter 2 provides a brief summary of several half-hearted and, therefore, largely unsuccessful attempts to decentralise the planning process made since Independence. It also analyses the reason for the virtual failure of the earlier attempts and highlights some more

significant developments in recent years which tend to favour decentralised planning.

This is followed by two chapters dealing in detail the planning process of IRDP, NREP and RLEGP, suggesting necessary measures to improve the overall quality of planning and process of execution. Three chapters, next, discuss comprehensively the organisational aspects of planning with special reference to District Planning Board and District Rural Development Agency.

It also attempts to answer the question of the participation of non-governmental agencies and people at large in the planning process at the grass roots. He makes a strong plea for such participation and gives suggestions for making it more effective and meaningful. The last two chapters are primarily concerned with the methodological aspects of grassroots planning. According to the author, just as there is appropriate technology, there is similarly appropriate methodology for planning. In brief, author, in this volume, has very candidly attempted to diagnose the problems and weaknesses of the system of decentralised planning in India and prescribes, there upon, measures for improving the quality and plan formulation and process of implementation. He has endeavoured, rightly, to examine the issues, themes, problems and prospects of decentralised planning in India.

The volume is comprehensive and quite methodical and should prove quite useful to all those who matter in plan and policy formulation, particularly, planning at the grassroots. It should prove to be of great practical significance to them.

Tushar Kant Mishra

Story of Public Sector Steel by Manohar Bandopadhyay, Publications Division, Ministry of Information and Broadcasting, Government of India, Patiala House, New Delhi 110001; December 1987, Pages ix+180, Price Rs. 35.00

The science and technology of steel-making in India is more than 4000 years old. According to *RIG VEDA* (2000 B.C.), the steel metal was being used by the tribes of the time quite before the composition of the scripture. The Iron Age of India preceded the European iron industry by about 3000 years. India is the first producer of carbon steel known as Wootz Steel. V. Ball has méntioned in Economic Geology (1881) that the metal exported from India was Wootz Steel and it took possibly 2000 years ago. According to Quintas Curtius, when Alaxander the Great defeated King Porus in 326 B.C., he accepted from him only 30 pounds of steel as he thought the little mass of metal devalued all the fabulous riches of India. The famous iron pillar standing at the site of historic Qutab Tower in New Delhi speaks of India's excellence in science and technology of steel-making in the fourth Century A.D.

Jawaharlal Nehru called the steel plants as the modern temples. With his vision and initiative three steel plants were set up in the country after Independence in quick succession. The steel-making capacity in the country today has reached a level of more than 15 million tonnes, which is more than 12 times higher than the quality of steel produced before Independence.

The Story of Public Sector Steel is a well witten treatise on development of steel industry in India. Almost all aspects of steel industry have been covered in this slender but comprehensive book. The book consists of 18 chapters and a number of tables replacing text. It is very well illustrated by photographs showing the various facets of steel industry as well as the human profile of the steel plants. The author has covered the history of the science and techology of steel-making in India since the ancient times. The description of the various steel plants is full of historical and technical information. The book provides a detailed description of the public sector steel pants situated at Bhilai, Bokaro, Durgapur, Rourkela and Burnpur (IISCO), which are under the administrative control of the Steel Authority of India Limited (SAIL) and also those at Salem, Bhadrawati and Visakhapatnam. Besides the detailed description of the steel plants, the book also provides information on the growth of research and development (R&D) achieved in the indigenous steel industry. The author has also covered the human aspect of steelmen including their training to meet the general curiosity of the reader.

The book has been written with a view to acquainting the general readers with the story of development and growth of iron and steel industry in India. The main focus is on the public sector steel plants, and the private sector steel plants, and the private sector steel plants are not included in the book. The book provides a glimpse into the future development and growth of indigenous steel industry which has made giant strides in research and development in steel making technology and also in indigenisation of steel plant construction.

On the whole the book is quite informative and will be useful to both the general readers as well as those who are associated with steel in one way or the other.

Dr. M.K. Pandey

Social Work and Development by K.D. Gangrade, published in 1986 by Northern Book Centre, New Delhi, pages 132, price Rs.120

The system of Panchayati Raj has added to the spoils of political organisations further depriving the poor of whatever advantage they could get from the programme of services. Thus the development of grass-root communities through decentralised administration has lost its effectiveness adding one more illusion to development. This is the conclusion drawn by Prof. K.D. Gangrade of Delhi School of Social Work in this book after study of three villages of Delhi.

The book examines the role of social work in development process in the context of Community Development Programme in India. It also gives history of rural development and value of social work interven-

tion in organising rural poor. The main thrust of the book is on involvement of local population in their own development rather than merely accomplishment of projects/programmes by outsiders. The social work in India is ill-equipped to face the challenge of change not only in India but also in most of the developing countries of Asia.

The book consists of seven chapters giving an over view of rural development programme, relevance of social work to community development, characteristics of rural life, struggle for power in villages particularly during panchayat elections and its impact on development programmes,etc.

The Panchayati Raj has failed in its main aim of evolving leadership as the villages have leadership pattern of their own based on caste-kinship and territorial ties. The faction complexities block rather help in the progress of village. The village elections on Panchayat elections have created more problems than they can solve resulting in reinforcement of village factions, revival of caste-feelings as the leaders resort to various types of unfair means creating even law and order problems. Thus shift of power to poor is very slow unless they use their vote to win power.

The conclusion drawn by the author seem too general. The study of three villages in or around Delhi does not appear to be sufficient to draw conclusions applicable to the Panchayati Raj system throughout the country. The author should have made still indepth study of more villages. Anyhow book provides an interesting study particularly to social workers, politicians and students of social sciences.

S.K. Nayyar

INDIA'S ROAD TO INDEPENDENCE: N.M. Khilnani, Sterling Publishers Pvt. Ltd., New Delhi, 1987 Edition Hard-bound, price Rs. 90 , Pp-150 including Appendix and Index.

The book holds up a mirror to India's freedom movement spanning a period of ninety-year struggle for independence with objectivity and clarity. Dr. N.M. Khilnani starting his career as a lectuerer in History and Political science at D.J. Sind College (Bombay University) joined the Historical Research Division of the Indian Foreign Office; he was associated with CHOGM and the 7th Non-alligned Summit at Delhi. At present he is a Senior Fellow of the Indian Council of Historical Research. He wrote several outstanding books which were widely acclaimed.

Divided into as many as fifteen chapters the book presents the epic story of our national struggle from 1857 until August 1947. The East India Company was to all intents and purposes a combine of predatory, rapacious, grasping and stringent freebooters. The period following the battle of Plassey was one of resistance and revolt in almost all the regions; the matters climaxed towards the middle of the nineteenth century. The banner of open revolt was raised in 1857, but because of the lack of co-ordinated leadership, India's endeavours came to naught and India was added to British Empire. However, India began to have western orientation through the spread of English education. The post-1858 era may well be regarded as a period during which new contours of national awakening emerged. The Indian National Congress founded in 1885, came to have a galaxy of leaders like G.K Gokhale, Madan Mohan Malaviya, Mahatma Gandhi, Jawaharal Nehru and a host of others. Pre-Gandhian Phase was replete with new situations; the British Government continued playing off Hindus against the Muslims, termed Divide-and-Rule-Policy. The Gandhian Era began after the Jallianwala Bagh Tragedy. India was convulsed. From Nagpur Session of the Congress in 1920 the leadership provided by Mahatma Gandhi gave a new turn to the strategy of fighting the British menace; non-violent struggle smashed the brute force of the alien rule. The years from 1930 onwards were full of turmoils. *Satyagrah* (non-violent resistance) proved to be a deadly weapon hurled at the foreigners, who were compelled to part with power on 15th August,1947. Making their exit the British Imperialists cunningly got the country partitioned thus leaving behind a festering sore in the subcontinent.

India's emancipation after nearly nine decades reveals very unique characteristics and intersting features. Adoption of non-violent methods not smeared with any ill-will ushered in a new era, releasing a powerful chain-reaction in different parts of Asia. French and Dutch Domains of Imperialism collapsed within a short period. India is thus a pivot of freedom in the Afro-Asian world. South African Racist Regime too is not far away from the final collapse. Indian struggle for Independendence has projected a world-wide perspective; the coming generations will continue to benefit from the turn that India gave to the history of the world; it may well be described as the 'Beacon of Light'.

Written in a placidly lucid style, the book would attract wide readership and interest. It is quite moderately priced, and elegantly produced.

Dr. Tara Charan Rastogi

(Contd. from page 27)

Union and china. Nehru certainly did not want this type of war against poverty. He chose the socialistic pattern which will have the economic ideals of socialism and democratic values of capitalism. The combination of the ideals of socialistic and capitalistic economy resulted in the mixed economy. Nehru, the great visionary, gave this economic system to India which is being followed even today. Nehru was very much ahead of his time but, unfortunately, he did not live long to see the implementation of his ideas. The seeds of the economic fruits which India is reaping today were sown by none else than Jawaharlal Nehru." ☐☐☐

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YOJANA

January 26 Special

will be devoted to the Panchayati Raj system in the country. The learned authors of the issue, belonging to economic, political and social spheres, have highlighted success and failures of the system and suggested steps that are needed to be taken to strengthen it.

The Yojana Special will combina Janary 16-31 and February 1-15, 1989 issues..

Please ensure your copy

Using improved technology for dryland farming

Dr. S.S. Khanna & Dr. M.P. Gupta

The dryland or rainfed areas constitute about 70 percent of the net sown area contributing only 42 per cent of the total foodgrains production in the country. The authors here focus on the vast potential that the dryland areas hold which, if exploited properly, can boost the country's agricultural production by 100 percent as per the findings of various agricultural studies and researches. To maximise foodgrains production, the authors assert, farming approach coupled with the application of modern science and technology must to considered seriously. The authors also suggest future strategy for increasing farm production in the dryland areas. They feel that since the country has been divided into 15 climatic zones, a research package for each of them has become all the more essential now as a step to achieve the objective.

AGRICULTURE IS THE BACKBONE OF THE INDIAN ECONOMY. About 70 per cent of the country's present population of 800 million is dependent on agriculture and it contributes nearly 39 per cent of the gross national product. After the initiation of the First Five Year Plan in 1951, due emphasis on agriculture has been accorded during the planning process. With the successive Plan periods, foodgrain production as well as agricultural production showed slightly higher growth rates compared to the population increase in spite of the fact that there have been severe droughts, floods and other constraints. During these 37 years of agricultural planning in India, the country has achieved near 'self-sufficiency' in foodgrains from a base level production of 35 million tonnes to a production level of 152 million tonnes and in 1988-89 it is expected to be around 170 million tonnes. Even though total area of the country is 329 million hectares, only 143 million hectares is net sown area, out of which about 70 per cent of the area is unirrigated contributing about 42 per cent of the total foodgrain production. These dry land/rainfed areas are inhabited by the poor people of the country who have negligible resource at their disposal and their land holdings too are very small. The important problem is due to moisture availability in soil system, which in turn is dependent upon the distribution, intensity and frequency of rainfall. Most often these areas suffer from moisture stress and thereby affecting the nutrient availability.

Of the total geographical area of the country, the area subject to water and wind erosion is 150 million hectares; area degraded through water logging, alkalinity, ravines and shifting cultivation is 25 million hectare. Forty million hectares is flood prone area in the country. It is this area which would deserve our serious attention during the coming plan periods.

According to Agriculture Census 1980-81, the percentage of marginal holdings (less than one hectare), small holdings (1-2 hectares), semi-medium holdings (2-4 hectares), medium holdings (4-10 hectares) and large holdings (10 hectares and above) to the total operational holding in the country were 56.6, 18.0 14.0, 9.0 and 2.4 per cent respectively. The area operated by marginal, small, semi-medium, medium and large size group of farmers were 12.0, 14.0, 21.2, 30.0 and 22.8 per cent respectively. This indicates that about 75 per cent of the operational holdings are managed by marignal and small farmers who only operate 26 per cent of the total cultivated area.

The annual rainfall of India, based on data of about 405 stations all over the country, works out to be at 117 cm., which is the highest rainfall per unit area in the world for a country of a comparable size. The total precipitation is estimated to be 400 million metre hectare of water. The annual rainfall, however, fluctuates from region to region, both in space and time. On the basis of the rainfall, the country can be divided into three broad zones-dry (below 750 mm.) medium (750 to 1150 mm.) and assured (1150 mm. and above). These categories comprise 30, 42 and 28 per cent of the total area of the country, respectively. About 75 per cent of the annual rainfall is received during June-September through the South-West monsoon phenomenon, while the winter season rains are 10-11

per cent of the total rainfall of the year.

Foodgrain production

The gross unirrigated area as percentage of gross cropped area of the country is 69.3 per cent. Unirrigated areas in India are characterized with low and unstable crop yields. The unirrigated area vary from State of State. In the Northern States of Haryana, Punjab and Uttar Pradesh more than half of the cultivated area is under irrigation. It may be pointed out that in about 95 per cent of the area the cultivation of sorghum, pearl millets and groundnut is in rainfed conditions. With respect to pulses, 92 per cent of the area is also under rainfed farming. About 80 per cent of the chick-pea, maize and cotton area is under rainfed. Sixty five per cent of the area of rapeseed/mustard and 62 per cent of the area under rice is also under rainfed conditions. Only 35 per cent of the wheat area in the country is under rainfed conditions.

Rice yield in the country has more than doubled indicating an increase from 668 kgs per hectare in 1950-51 to 1568 kgs per hectare in 1985-86. On the other hand, in case of wheat, the productivity has tripled, i.e., from 663 kgs to 2032 kgs per hectare during the same period. But in the case of pulses and oilseeds such increase has not been observed. The productivity of pulses and oilseeds was 441 kgs and 481 kgs per hectare which increased to 544 kgs and 591 kgs per hectare respectively during the same period. Both these crops being grown largely under rainfed conditions, the impact of technological breakthrough has not been to the desired level. During the period 1950-51 to 1985-86, the per hectare yield of sorghum, pearl-millet, maize has increased from 353 kgs to 641 kgs, 288 kgs to 345 kgs and 547 kgs to 1172 kgs per hectare respectively

Comparison of irrigated and unirrigated yields

The average yield under irrigated conditions for rice is 1314 kgs per hectare in Assam compared to 1028 kgs under unirrigated conditions. Similarly, in Orissa, the irrigated rice yield is 1366 kgs per hectare compared to 879 kgs under unirrigated conditions. Whereas in West Bengal, the irrigated rice yield is 2325 kgs per hectare compared to 1485 kgs under unirrigated conditions. In Punjab, about 99 per cent of the rice is grown under irrigated conditions and the yield per hectare is 3062 kgs compared to 1131 kgs under unirrigated conditions. In Andhra Pradesh, where 94 per cent of the rice is grown under irrigated conditions, the yield per hectare is 2248 kgs compared to 1029 kgs under unirrigated conditions. In Madhya Pradesh, only 18 per cent of the rice is grown under irrigated conditions and irrigated yield per hectare is 1212 kgs compared to 800 kgs under unirrigated conditions. Thus, it would be seen that the irrigated yield in all the States are far more than under unirrigated yields (Table 1).

In the Northern zone, in the State of Haryana, Punjab and Uttar Pradesh, irrigated area under wheat is about 94 per cent in the States of Punjab and Haryana and about 84 per cent in Uttar Pradesh. The irrigated wheat yield in Haryana is 2507 kgs per hectare compared to 1528 kgs under unirrigated conditions., Whereas in the State of Punjab, the irrigated wheat yield per hectare is 3068 compared to 1637 kgs under unirrigated conditions. In Uttar Pradesh, wheat yield per hectare under irrigated conditions is about 1897 kgs compared to 1182 kgs under unirrigated conditions. Thus, it would be seen that the irrigated yield in all the States are far more better than under unirrigated yields.

Table 1

Statewise Irrigated and Unirrigated Yields of Principal Crops.

Zone	State	Crop	% age of irrigated area to total area under crop	%age of unirrigated area to total area under crop	Yields in Average of Triennium Irrigated	Kgs//ha 1981-82 to 1983-84 Unirrigated
East	Assam	Rice	23.0	77.0	1314	1028
	Orissa	,,	27 4	72.6	1366	876
	West Bengal	,,	24.9	75.1	2325	1485
North	Punjab	,,	98 7	1.3	3062	1131
South	Andhra Pradesh	,,	94.2	5.8	2248	1029
West	Madhya Pradesh	,,	17 7	82.3	1212	800
North	Haryana	Wheat	94.0	6.0	2507	1528
	Punjab	,,	93 5	6.5	3068	1637
	uttar Pradesh	,,	83.6	16.4	1897	1182
South	Andhra Pradesh	Sorghum	0.9	99.1	1778	604
	Maharashtra	,,	5 4	94.6	924	712
South	Andhra Pradesh	Pearl-Millet	11.0	89.0	1256	610
North	Haryana	,,	14.4	85.6	922	485
North	Punjab	Maize	63.6	36.4	1951	1161
South	Andhra Pradesh	,,	22.0	78 0	2633	1619
West	Maharashtra	,,	11.3	88 7	1280	988
South	Andhra Pradesh	Groundnut	20.2	79.8	1304	949
	Karnataka	,,	16.4	83.6	1349	1114
	Tamil Nadu	,,	27.1	72.9	1552	971
West	Gujarat	,,	11.5	83.5	1252	799

In case of sorghum, which is mainly a dryland crop, there is wide difference in the irrigated yield per hectare compared to unirrigated yield. In Andhra Pradesh, the irrigated yield of sorghum is 1778 kgs per hectare compared to 604 kgs under unirrigated conditions. For pearl-millet in Andhra Pradesh, only 11 per cent of the area is under irrigated conditions giving a yield of 1256 kgs per hectare compared to 610 kgs under unirrigated conditions.

Sixty four per cent of the area under maize crop in Punjab is under irrigated conditions which yields 1951 kgs per hectare compared to 1161 kgs under unirrigated conditions. In Andhra Pradesh, 22 per cent of the area is under irrigated conditions yielding 2633 kgs per hectare compared to 1619 kgs under unirrigated conditions. Whereas in Maharashtra, only 11 per cent of the area is under irrigated conditions yielding 1280 kgs per hectare compared to 988 kgs under unirrigated conditions.

In Andhra Pradesh, 20 per cent of the area under groundnut is under irrigated conditions yielding 1304 kgs per hectare compared to 949 kgs under unirrigatrd conditions. In Karnataka 16 per cent of the area is under irrigated conditions which yields 1349 kgs per hectare compared to 1114 kgs under unirrigated conditions. In Tamil Nadu, 27 per cent of the area is under irrigated conditions yielding 1552 kgs per hectare compared to 971 kgs under unirrigated conditions. In Gujarat, which is the major groundnut producing State of the country, only 11 per cent of the area is under irrigated conditions yielding 1252 kgs per hectare compared to about 800 kgs under unirrigated conditions. Thus, it would be seen that for groundnut crop also, irrigated yields are substantially higher than unirrigated yields.

On-going major programme

Research

Considerable research and development have been made for dryland farming in the country since 1933. These were accelerated by starting in 1970 by the Indian Council of Agricultural Research an All-India Coordinated Research Project for Dryland Agriculture with 23 cooperating research centres located in the State agro-climatic zones of the country, largely located in selected agroclimatic zones of the country, which are located mostly in the State Agricultural Universities. The research results obtained at different centres reveal that yield of dryland crops could be increased by atleast 100 per cent through selection of suitable crops and varieties, cropping substitutions, inter cropping, planting pattern and rate of planting fertilisers and weed control, etc. Studies reveal that the performance of various new crops has been quite rewarding. Results summarized in Table 2 indicate that if efficient crops are grown the quantum of yield obtained is much higher than the traditional crop grown in the region. Cropping intensity could also be increased by adopting inter-cropping or sequential cropping techniques in better rainfall regions. Since the soils of rainfed areas are not only thirsty but hungry too, the use of balanced fertilisers alongwith farm yard manures has to be taken up in a concerted manner.

Table 2

Relative yield of traditional and efficient crops

Location	*Traditional crop*	*Yield q/ha*	*Efficient Crop*	*Yield q/ha*
Bellary	Cotton	2.0	Sorghum	26.7
Varanasi	Wheat	8.6	Chick Pea	26.5
Ranchi	Upland rice	28.8	Maize	33.6
Indore	Green Gram	11.8	Soyabean	33.3
	Wheat	11.2	Safflower	24.2
Agra	Wheat	10.2	Mustard	20.4
Hissar	Wheat	3.2	Eruca Sativa	16.1
Udaipur	Maize	18.0	Hybrid Sorghum	29.0

The effect of optimum time of sowing has to be exhibited at the farmer's field. The results of the All India Coordinated Research Project indicate that when the Sorghum (CSH-5) was sown late the yield was 2.75 q/ha but when it was sown on scheduled date the yield was 18.40 q/ha. The sowing of sorghum at the pre-monsoon time avoids the damage by shoot fly and thus the potential yield could be obtained.

Another aspect which is quite important is the integrated nutrient management. The data obtained at Ranchi in upland rice indicate that by an application of 30-20-10 NPK (kg/ha) the yield was 18.7 q/ ha.

Refining the system

The importance of life saving irrigation as a potential means of increasing and stabilising production on dry land has been brought into sharp focus. Farming system approach for maximum exploitation of the resources

Table 3

Genotype of barley, pulses and oilseeds that performed well on drylands of different regions

Crop	*Centre*	*Genotypes (in order of performance)*
Barley	Rakh Dhinasar	'Sonu', 'BHS', 'HBK 316', 'HEL 329'
Pigeonpeas, rabi	Akole	'MAUE 175', ICPL 84008', AS 71-37, 'BWR 370'
Horsegram	Bhubaneswar	'DHS, 82-3', 'DHS 82-2', 'DS2-1' 'IC 42'
	Bangalore	BGM-1-1-8-3', CODB-6', 'IC 11095'. 'IC 42'
Chick pea	Rewa	Large Seeds: 'BG 303', 'BG 256', 'GP 16', 'BG 256' Medium Seeds 'BGM 428', 'GP2-20', 'GP 9060'
	Agra	'BG 256', 'Gaurav', 'BG 244', 'L550'
Safflower	Ranchi	'KM 55', 'KM 40', 'KM 44', 'KM 25'
Sunflower	Bijapur	'SS 49', 'EC 68145', 'KSF 4-1', 'SS 56'
Taramira	Varanasi	'RTM 2-1', 'RTM 522', 'TMH 851' 'JOBTC 1'
lentil	Rewa	Small seeds: 'K333', 'HUL 8', 'JL 1', 'LL 299'
	Agra	'Pant L 4076', 'Sehore 74-3', 'Pant L 639', 'LIS 11
Mustard	Varanasi	'RIM 619', 'Kranti', 'RIM 514', 'Sita'.

for achieving the maximum profit has to be considered. Towards further refinement of the system, identification of genotypes, manipulation of sowing and harvesting dates, plant population and fertiliser use have been drawing the attenition of the sicentists.

Since pulses and oilseeds are largely grown in rainfed areas these have formed a major thrust of the cropping system. Stable and economically viable intercrop system with potential of higher productivity, income and land use efficiency have been evolved.

Alternate land use

In order to meet the ever increasing demand for food, foddor, fuelwood, timber, etc. an alternate land use to crop production is required. It is also essential that we not only view the whole problem for sustainability of production but also manage these areas with an environmental angle too. In fragile drylands some time alternate land use systems are less risky, more productive. It is vital to examine these areas with different options such as :—

1. Arable lands — Agroforestry system (Alley cropping, agri-horticultural system, Hortipastoral system, etc.)
   Inter-cropping with nitrogen fixing plants/species
   — Ley farming.
2. Cultural waste and marginal lands — Tree farming/wood lots
   — Range/pasture management
   — Silvi pastoral management system
   Timber and fibre system

Due to the poor resource base of the dry land farmers, higher initial investment, and long gestation period of the horticultural/agro forestry crops; and concomitant requirement of their food do not permit them to adopt these systems and thus they often keep on doing the age old practice. Unless some new and innovative approach based on system analysis and by taking into consideration the socio-economic condition of the people is framed/formulated/executed we may not get seccess in this venture.

Looking at the importance of the dryland agriculture and the fruitful research findings obtained from the All-India Coordinated Research, the Government of India has set up a Central Research Institute for Dryland Agriculture at Hyderabad, Andhra Pradesh,

Potential

The improved dryland technologies are viable, applicable and replicable if the resource constraint is overcome to the desired level. It is nevertheless difficult to examine the results on a short-range basis. The payback period is quite long and therefore one has to look at it with a span of 5 or 10 years. As an example an endeavour is made in Table 4 to indicate the impact of improved techologies on the average yields (productivity) of some dryland crops.

Except pulses in all other crops the yield levels have increased. During the Seventh Plan (1985-90), we are expecting a further uptrend and may be able to achieve the desired targets of about 180 million tonnes of foodgrain and 15.5-16.0 million tonnes of oilseeds.

Table 4

Average productivity of dry land crops

S.No.	Crop	Base year period (1950-51) yield	Fourth Plan period 1969-74) yield	Fifth Plan period 1974-79) yield	Sixth Plan period (1979-84 yield
1.	Sorghum	353	488	670	695
2.	Pearl millet	288	476	448	483
3.	Maize	547	1052	1068	1158
4.	Pulses	441	491	502	480
5.	Five major oilseeds	481	541	580	603

Developmental programmes

A pilot project on Integrated Dryland Agriculture Development was taken up at 24 places during the Fourth Five Year Plan (1969-74). In 1972, Drought Prone Area Programme was started in 54 districts of the country. A series of trials (about 3250) were conducted on farmers' fields from 1976 to 1982 to assess the contribution of various components in the crop production technology under dryland agriculture. The major highlights of the results show that :

(a) the average increases with a package of improved paractices (at moderate level) are of the order of 92 7 per cent in creals, 84.2 per cent in pulses and 71.4 per cent in oilseeds.;
(b) the benefit cost ratio worked out to 2.23 for chickpea, for cereals it was between 0.05 to 2.29, for pulses it ranged between 0.12 to 3.82 and in case of oilseeds it was between 0.27 to 1.92;
(c) inter-cropping enhances the productivity and increases the benefit-cost ratio;
(b) there was an increased demand of labour to the tune of 19 per cent including that of women labour. The utilisation of bullock power also increased by 20 per cent with the introduction of improved dryland farming practices.

Watershed management programme

On the basis of the past experience a 'watershed' approach has been launched by the Government of India in December 1986. The objective are:—

(i) taking the "watershed" as a basis to conserve and upgrade both crop lands and watelands (culturable wastelands coming in watershed) as a vital natural resource;
(ii) to stabilise and increase crop yields from rainfed farming and to augment the fruit, fodder and fuel resources by use of appropirate alternate land use system: and

(iii) to develop and disseminate technologies for the proper soil and moisture conservation methods required under different conditions to achieve these objectives.

For the implementation of this programme 99 districts have been selected in 16 States. The main components under the programme are:

(i) Land and moisture management;
(ii) contingency seed stocking and supply of seedlings and grass seeds/slips;
(iii) training, short-courses, seminars, study tours, etc.
(iv) adaptive research activities-conducting of adaptive trials of crop prodcution on small and marginal farmers' land;
(v) improved tools and equipments, fabrication and supply of these;
(vi) preparation of the scientific material for further dissemination of well proven technology.

During the years 1987-88 the country faced the worst drought of the country. It is because of such programmes the country was able to produce 138 million tonnes of foodgrains. The field results of these watersheds have been highly encouraging. Some of the major watershed programmes in the country are given below:—

(a) Kandi Watershed and Area Development Project-Punjab

The Kandi Watershed and Area Development Project, Punjab was started for a period of five years in 1980-81 with the assistance from the World Bank. The Project period has now been extended to seven years.

The main objectives of the Project are:

(i) to protect upper catchment areas from ecological degradation through soil conservation measures, provision of suitable vegetation cover and re-afforestation, and
(ii) to protect and develop agricultural land which is subject to serious erosion, flooding and deposit of sedimentation.

(b) World Bank aided Pilot Project for Watershed Development in Rainfed Areas

World Bank aided project for Watershed Development in Rainfed Areas in the State of Andhra Pradesh, Karnataka, Madhya Pradesh and Maharastra is in operation since June, 1984. The project is to be implemented in 8 watersheds-two watersheds in each State with an area of about 25,000 ha under each watershed. The main objectives of the project are to verify technology packages which are applicable under different environmental and social conditions so as to ensure stability of production and increase productivity of rainfed areas in the concerned States. The project has an integrated watershed management concept to adopt technology for increasing and stabilising crop and forage yield and production of fuel wood and timber in selected rainfed farming areas.

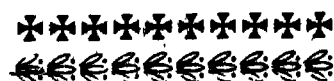
(c) World Bank Aided Himalayan Watershed Management Project, Uttar Pradesh

The main objective is to minimise in selected areas further deterioration of the Himalayan eco-system caused by depletion of forest cover, over grazing, bad land use and careless road construction.

The project components include: (i) establishment of mixed fuel, fodder and timber plantation over about 1 lakh ha of Government, Panchayat and privately owned lands, (ii) construction of soil conservation structures, terracing of arable land, (iii) improvement of agricultural practices, cropping patterns, (iv) development of horticulture in existing and new fruit orchards, (vi) minor irrigation development through 'ghuls' and small masonary tanks, (vii) providing research and training support and (viii) regular monitoring and evaluating through a competent organisation.

Future strategies

In order to maximise the production per unit of area through a system approach and with application of modern science and technology, the research package for various agro-climatic zones of the country is essential. The country has been divided into 15 agro-climatic zones by the Planning Commission and the Indian Council of Agricultural Research has come out with 127 micro agro-climatic zones.

1. The water harvesting techiques for harnessing of the rain water by check dams/community tanks/field tanks etc. have to be developed for specific areas through a system approach.
2. Contingency planning is to be developed to overcome the conditions created by aberrant weather by way of seed supply of particular crops and varieties and tools and equipments, implements, fertilizer and insecticides/weedicides etc.
3. Supply of life-saving irrigation through conjunctive use of surface and ground water has to be encouraged.
4. Transfer of technology for rainfed areas is higly site and location specific. The extension personnel involved in it should be thoroughly trained in these technologies and they should have built in linkage with those involved in the input supply network.
5. The rainfed farmers are poor, so special arrangements for credit supply to them should be made. They have to be well accommodated by way of providing inputs at reasonable costs with a built-in credit supply system.
6. Since the cost of production under dryland areas is relatively higher and the capacity of the farmers in these areas to avail the market mechanism is limited, it would be better to provide procurement system at their doorsteps.

Focussing on rainfed farming

Surinder Sud

Here the author attempts to bring home the importance of dryland farming in India. According to him, dryland farming must be given its due place in order to find a solution to the problem of food deficit. The research in this sphere has established tremendous potential of dryland farming in raising farm production. Therefore, it is quite logical, that we have chosen 'dryland agriculture' as the theme for this year's World Food Day celebrations.

THOUGH AGRICULTURAL PRODUCTION IN INDIA has gone up substantially, especially since the green revolution in the mid 1960's, it has indeed not acquired the much-needed stability. The fluctuation in grain output of the order of 20 million tonnes or more are not uncommon despite the much talked about resilience of the Indian agriculture. It is due largely to the fact that agriculture's dependence on weather has not diminished appreciably notwithstanding the emphasis laid over the years on the development of irrigation. It has now been realised that the expansion of irrigation facilities alone cannot meet the challenges on the agricultural front. The role of farming on the vast unirrigated tracts is equally important.

Solution to poverty

As it is, the dryland agriculture accounts roughly for three fourths of the total average grain production. The irrigated areas constitute only about 30 per cent of India's total farm land leaving nearly 70 per cent for rainfed farming. The real importance of the dryland agriculture can be gauged from the fact that even after harnessing the full irrigation potential of around 113 million hectare, about 70 million hectares of arable land would still depend on rains for agriculture. This is more than one fifth of the country's total land mass and slightly less than half of the total cropped acreage.

It is, therefore, only logical that India has chosen "dryland agriculture" as the theme for this year's World Food Day celebrations though the U.N. Food and Agriculture Organisation has selected "Rural Youth" as the focus of global attention on this day. For a country like India, which has faced a severe drought only last year, no subject can really be more important than dryfarming.

The dryland agriculture is crucial for India for another reason as well. Over 75 per cent of the farmers engaged in dryfarming being small and marginal types, dryland agriculture is linked closely with poverty in the country. It is now clear that though it may theoretically be possible to solve India's food problem by concentrating on irrigated land, the problem of poverty will remain. It is indeed the dryland agriculture which has the solution for the twin problems of food and poverty.

Tremendous potential

The research conducted by institutes of the Indian Council of Agricultural Research, agricultural universities and other organisations has established that the dryland areas have tremendous potential for raising farm production. The crop yields can even be trebled by following certain easily comprehensible agronomic practices.

In most regions of the country, it is possible to raise two crops a year on drylands. The ideally suited crops include coarse cereals like sorghum and millet; pulses like chickpea and pigeon pea; and oilseeds like groundnut, mustard, etc. Timely crop sowing is believed to determine, to a large extent, the success of dryland farming. Besides, conservation of stored soil moisture, the use of improved crop varieties; satisfactory weed control. and moderate levels of fertilisers help raise crop yields substantially.

The recent shift in official policy, recognising watershed as the basis for development of agriculture, has generally been welcomed by experts. As many as 4,400 watersheds are now being developed throughout the country.

Stabilising measures

Apart from specifying crop varieties and crop production technology suitable for different agro-climatic situations, the Indian Council of Agricultural Research has outlined the measures needed for stabilising farming on unirrigated lands. These include facilities for in-situ moisture conservation; storing run-off rain water in farm ponds to be owned individually or

Fight TUBERCULOSIS

1. If you are having continuous cough for more than two weeks or if you notice blood in sputum, may be, you are suffering from T.B. of lungs.

2. Get yourself examined especially your sputum at the nearest Primary Health Centre, Dispensary or T.B. Centre.

3. T.B. can be cured provided medicines as advised by the doctor are taken regularly for the prescribed period.

4. Prevention is always better than cure. So get your child vaccinated with B.C.G.

Central Health Education Bureau (D.G.H.S.)
Min. of Health and Family Welfare, Kotla Road,
New Delhi-110002.

davp 88/412

Carrying new farm technology to fields

Som Dutt

In this article, the author highlights the handicaps that hinder the transfer of new technology to farmers. This, according to him, results in a wide gap between the potential production and the actual production. He, therefore, underscores the need for strengthening extension directorates of the agricultural universities by making and publicising locationspecific films on relevant topics.

WITH DAY-TO-DAY ADVANCES MADE IN AGRICULTURE, the transfer of its technology has become extremely important. The transfer of proven research of practical importance for no-farm implementation by farmers has become a necessary part of the work of our agricultural univrsities and research institutions. Communication of agricultural education has very important role in ensuring the self-sufficiency in food production. The gap between evolution and easy-to-adopt technologies developed by our 30,000 scientists should be bridged so that 80 per cent people of India (peasants, farm women and youths in the under-privileged sections of the country) living in rural areas and ecologically and economically backward regions may be benefited properly.

The Indian Council of Agricultural Research (ICAR), agricultural universities and selected voluntary agencies have been implementing such 6 first-line projects of extension education. These aim at (i) organizing demonstration by scientists to show the production potential of the latest technologies of farmers and extension functionaries without loss of time, (ii) getting the feedback for modifying research and education programmes, and (iii) developing extension approaches to suit the socio-economic conditions of the farmers. These programmes are National Demonstrations Project (NDP), Operational Research Projects (ORPs), Krishi Vigyan Kendras (KVKs), Lab-to-Land Programme (LLP), ORP for tribal areas, and ORP for socio-economic upliftment of scheduled castes and backward communities.

National demonstrations project

Nation-wide demonstrations programme 'National Demonstrations' was launched in 1964. The rationale behind the scheme is that unless the scientists could demonstrate what they advocated, their advice might not be heeded to by the farmers. The national demonstrations serve as a window to the world of production, plenty and prosperity. They also show wide yield gaps which existed between these demonstrations and the farmers' fields.

This project is in operation in 48 districts of the country. A team of scientists goes to the small farmers and conducts demonstrations. They show the differences with single crop, two crops, three crops, problem soils, rainfed lands and some of them with entire farming system including vegetable and fruit production, dairing and related activities. During these demonstrations, new technologies are also disseminated. Besides, special training programmes are also organized to expose farmers to new technologies.

Operational research projects

For strengthening inter-disciplinary approach with division of labour among scientists, the research has been classified: (i) basic or fundamental research (creation of knowledge), (ii) applied research (creation of knowledge to solve problems), and (iii) adaptive research (field trials of research findings). Operational Research Projects (ORP) aim at disseminating the proven technology in a discipline/area among farmers on a watershed basis (covering the whole village or a cluster of villages) and concurrently studying constraints (technological, extension or administrative) as barriers to the rapid spread of improved technical know-how.

The work under ORP is being conducted on crop husbandry, plant protection, dryfarming, mixed farming, watershed management, fisheries, soil reclamation, etc. About 146 centres are conducting these researches in India. The increases in crop yields have been found from 30 to 293 per cent in cereals, 40 to 163 per cent in pulses, and 54 to 342 per cent in oilseeds. In waterlogged coastal soils, the yield of crops like rice could be increased by over 400 per cent. And the new technology has been developed in respect of (i) the use of new varieties, (ii) early planting, (iii) high basal dose of fertilizers, (iv) top-dressing of nitrogen after recession of floods, and (v) plant protection. In case of cotton crop, farmers could control jassids in the

vegetative stage by fewer sprays than non-ORP farmers. These farmers get higher yields spending lesser money than the non-ORP farmers.

The National Dairy Research Institute, Karnal, Haryana, inplemented an ORP on integrated milk production in Karnal, which gave significant results. In Andhra Pradesh, the farmers of the ORP villages increased their cropping intensity in rice-based cropping systems.

Krishi vigyan kendras

To provide vocational education in agriculture and allied fields at the pre post-matriculate levels to cater to the training needs of a large number of boys and girls from rural areas' Education Commission (1964-66) recommended to establish such institutions named as 'Agricultural Polytechnics'. Finally, the ICAR mooted the idea of establishing Krishi Vigyan Kendras (KVKs) Farm Science Centres as innovative institutions for imparting vocational training to the farmers and field level extension functionaries.

There are 89 KVKs and 8 Trainers' Training Centres (TTCs) spread all over the country. These impart skill-oriented training in agriculture and allied areas to farmers, farm women, rural youths, school drop-outs and field-level functionaries. Learning-by-doing and teaching-by-doing are the methods followed for imparting training to the target groups. The teachers of KVKs keep abreast of the latest know-how both in technology and teaching. All the 8 TTCs are working in the disciplines of dairing, inland fisheries, marine fisheries, horticulture, dryland farming, agricultural engineering and home science.

The short and long-term training courses are conducted in crop production, livestock production, horticulture, home science, agricultural engineering, fisheries and related discipline based on the needs and technology gaps assessed through village and family surveys. These courses are organized at the campuses of KVKs as well as in the villages for the benefit of extension personnel and rural masses, particularly of the weaker sections of the society. The KVKs have organized 6, 856 trainning courses for 70,292 farmers, farm women, rural youths and school drop-outs. Similarly the TTCs conducted 161 training courses for the teachers of the KVKs. A large number of persons are given training in different agricultural disciplines by KVKs every year.

Lab-to-Land programme

The Lab-to-Land Prgoramme (LLP), initially launched in 1979, was converted into a scheme of the Seventh Plan from 1 October 1986. It is implemented through 102 centres located in 8 zones. The participants of LLP are 26 agricultural universities, 8 other universities and affiliated colleges, 30 ICAR institutes and 38 voluntary and government organizations. Under LLP, about 24,658 families have been adopted, and the ICAR institutes have been advised to run the programme from the budget savings of the institutes.

LLP is educational and motivational in nature. It transfers low-cost, location-specific packages to small farmers and landless labourers, with special emphasis on scheduled castes and backward communities. Landless labourers are mostly involved in dairing, sheep-rearing, goat-keeping, popultry-keeping, duck-rearing piggery, beekeeping, fisheries, mushroom cultivation and in-vocational enterprises like weaving, leather work and basket making. Farm women are being trained in kitchen gardening, tailoring, embroidery, vegetable and fruit preservation, and bakery. In case of small farmers, special attention is being paid on pulses and oilseeds production in all the zones and on rice production in the eastern zone.

For the upliftment of farmers belonging to the scheduled tribes, scheduled castes and other ecologically and economically handicapped farm families, research is being conducted at 4 ICAR institutes. An All-India Co-ordinated Research Project is also in operation at 19 centres in 16 states for the benefit of scheduled castes and backward communities.

The new varieties and the low cost technologies developed at the central institutes and the agricultural universities are being evaluated. And these are relevant to the socio-economic need of the tribals, which are being demonstrated and popularized for increasing productivity.

The tribals are given adequate training in maintaining oilengines, electric motors and plant-protection equipments, as well as in carpentry, tailoring, basket-making,mushroom cultivation and collection and sale of minor forest products like gum, honey and mahua flowers. Ambar charkha and soap-making are popular in Gujarat and rope-making in Rajasthan. Bee-keeping has become profitable venture in Kerala, Madhya Pradesh, Maharashtra and Orissa.

Tribal women and girls are given training in tailoring, grain storage, chopping of fodder, dairy, poultry-keeping, health, hygiene, nutrition and child care. Demonstrations of snacks making and others nutritious items are also organized.

Constraints production

There is still a wide gap between the potential and the actual production. The actual production breakthrough is yet to come about. There are several factors which influence the transfer of technology system/subsystems to the development of agriculture sector in the country. These factors are: (i) common basic constraints; (ii) technological constraints; (iii) organizational and administrative constraints; (iv) extension constraints; and (v) social constraints.

Among the constraints, proper marketing and pricing policy to cover all crops and animal products, conservation of soil and water resources, need to evolve high-yielding and resistant crop varieties, low cost and locally suited agricultural implements, judicious and balanced use of costly chemicals, extension education, etc. are major ones. In view of these constraints, there is a need for

among farmers' organizations not only for expressing their grievances and drawing the attention of the government for solving their problems, but also for reorganizing and modernizing the whole village community both for healthy living and social cohesion as also for sharing their experiences, inputs and economic gains among themselves.

strengthened extension set up

Extension division of the ICAR has strengthened with a handful of scientists who are subject-matter specialists in the fieldoriented disciplines. All the zonal-co-ordination units (8) are organizing all these first-line projects. This decentralized responsibility at the regional levels will help in closer and effective monitoring and supervision of programmes and projects.

Keeping in view the massive demand of transfer of agricultural technology in the country, all the extension projects of the ICAR are being (i) reoriented, consistent to the national priorities; (ii) consolidated by putting more inputs, wherever necessary; and (iii) enlarged to fill up the gaps, and to rectify the regional imbalances. More and more KVKs will be established to cover up all the remaining districts in the country. This will be a landmark in the vocational training programme.

The directorates of extension of all the agricultural universities are expected to be enlarged and strengthened, with the help of state as well as Central resources. The farm advisory services units of all the agricultural universities must be established at the district level to give constant support to the district extension machinery of the state departments of agriculture.

At present, the communication devices and support to the transfer-of-technology programmes are extremely weak. All the directorates of extension of the agricultural universities must be well planned in this respect. It is high time that they set-up their film production units for producing location-specific films on relevant topics.

There is also a great need for utilizing the resources at the command of specialists in areas of sociology and psychology together with the agricultural extension and economics services of the agricultural institutions for making well conceived and well-designed studies to support and propagate the transfer-of-technology programmes covering the entire country.

Recently, the association of the selected voluntary organization with the ICAR extension projects has been extremely rewarding. Such association will not only continue but will be strengthened during the seventh Five-Year Plan. Since the core of the Plan is agriculture, it is incumbent on the agricultural scientists to evolve new technologies ensuring that the targets of the plan are achieved. □□□

WFP helps conserve forests

Pamposh Dhar

This article gives an insight into the fast growing deforestation leading to the problem of soil erosion. Recognising the importance of forests, the Government of India has set a target of ensuring 33 per cent forest cover by the year 2000. The author here provides a detailed account of World Food Programme (WFP) activities complementing governmental efforts in this task.

THE WORLD IS LOSING FOREST COVER at an alarming rate, leading directly or indirectly to soil erosion, lower land productivity, water loss, increased drought and flooding. According to one recent study, an area somewhat larger than Ethiopia would have to be planted with forests to protect the world's ecosystems from further damage and meet the global requirements of forest products.

In a study released this summer, the Worldwatch Institute found that some 130 million hectares of new forests would have to be planted by the end of the century to slow down the present rate of environmental degradation and meet the growing demand for fuel, fodder, timber and industrial wood products.

While forest cover in industrialised nations is fairly stable, in the tropics almost 16 million hectares of forests are degraded or destroyed annually, the Institute said in the study, titled "Reforesting the Earth."

India loses up to a million hectares of forest cover every year. The National Remote Sensing Agency has estimated that nearly 20 per cent of the country is made up of wooded areas, but recent satellite pictures indicate that even this figure may be too optimistic: these photographs indicate that less than 17 per cent of India is under forest cover.

World Food Programme

The Indian Government, in a determined effort to remedy this situation, has set itself to the task of ensuring a 33 per cent forest cover by the year 2,000. In this effort, the government is being assisted by the World Food Programme, the food aid organization of the United Nations, which has supported India's development activities for 25 years.

WFP uses food aid to lend support to the government's forestry programme, which is designed to prevent further soil erosion and desertification, return vital nutrients to the land to make it more productive, prevent surface water run-of, diminish the danger of drought or floods. The programme also aims to produce sufficient quantities of forest products to meet the nation's requirements.

In addition to this, the labour-intensive forestry projects provide employment to tribals and poor people whose traditional sources of income have been severely hit by the unchecked deforestation of the past.

The World Food Programme has pledged food assistance amounting to more than US$ 166 million to back up government forestry projects in Bihar, Gujarat, Kerala, Madhya Pradesh, Maharashtra, Orissa, Rajasthan and Uttar Pradesh.

Ensuring better soil cover

Each of these schemes emphasizes a particular forestry or related activity depending on local conditions: in Rajasthan, the project focuses on reducing soil erosion and increasing grass cover; in Uttar Pradesh on watershed management; in Kerala, on social forestry and tribal area development.

The food commodities provided by WFP are distributed to workers engaged in afforestation, rehabilitation and protection of degraded forests, soil conservation, watershed management and social forestry.

The Programme's food assistance is not given as a dole in line with the government's Food for Work schemes. Every worker on the WFP-supported projects is entitled to a family food ration for up to five members in return for a modest contribution to a "WFP Fund" which finances community and rural development. In some cases, the Fund is used to extend the scope of the project.

A worker's contribution for the food commodities is not more than half the price of similar food normally available in the area or 40 per cent of the wage, whichever is lower.

Apart from supporting the government's forestry activities, WFP assistance ensures that poor people in remote areas have easy access to nutritious food at affordable prices. The food assistance improves the nutritional status of the workers and their families and allows them to divert the savings made in the family food budget to satisfy their other needs.

The funds generated from the workers' contributions are used to build schools, dispensaries, hospitals or secondary roads in the project area, canteens or labour sheds at the project site, or provide an insurance cover to the labourers.

In Rajasthan, for example, it finances the reforestation of barren hills and the creation of village woodlots. It is estimated that only nine per cent of Rajasthan's land area is under forest cover, and no more than a third of these forests are well stocked. The rest are barren hills or rooted wastes subject to serious soil erosion. The WFP-supported project in southeastern Rajasthan aims at reforestation and protection to check the erosion and production of grasses to complement land conservation measures through establishing better soil cover.

In Uttar Pradesh, the Fund is used to finance minor engineering works for watershed development to minimize soil erosion by the numerous rivers and curtail the surface run-off of rain water. In Kerala, the Fund finances the creation of tribal medicinal plantations and pepper plantations.

Tribal development

The development of tribal areas is an important objective of many of the projects supported by the Programme. Forestry projects in Bihar, Madhya Pradesh, Orissa as well as Kerala provide employment to tribals who have lived for generations in or around the forests, depending on them for their livelihood. Deforestation has disrupted their lifestyles, leading as it does to loss of income and destruction of their traditional society, culture and way of life.

Apart from the employment opportunities offered by the forestry projects, the WFP Fund also promotes rural development in the traditional homelands of the tribals.

The Fund generated by the workers' contributions for food in non-forestry projects can also be used for forestry activities. The WFP Fund created by the Programme's assistance to the Indira Gandhi Canal in Rajasthan's Thar desert finances the plantation of trees along the canal to prevent silting as well as sand dune stabilization by planting shrubs and grasses on the dunes.

The Fund generated by this irrigation project, which WFP has supported since 1966, is also used to help poor families to settle in the command areas of the canal. They are given loans from the Fund to cover the initial investment required to cultivate the newly irrigable land, for example to level their plots of land. These families are also entitled to WFP food rations for two years after settling in the area.

WFP aid to India

Forestry and irrigation form two major sectors of WFP support to India today: the third is supplementary nutrition. While more than 60 per cent of WFP's current commitments to the country support forestry activities, about a quarter provide supplementary nutrition for pre-school children, pregnant women and nursing mothers in the five states of Assam, Kerala, Madhya Pradesh, Rajasthan and Uttar Pradesh. The Programme also supports irrigation, rural development, human settlement and fisheries projects.

WFP has committed $850 million worth of food aid to India in the past quarter-century in support of 83 development and 13 emergency projects.

It currently assists 14 development projects in the country to which it has committed more than US$ 300 million.

Since the first agreement signed with India in 1963, to assist a poultry development project in Uttar Pradesh, the Programme has supported dairy, livestock and fisheries development, forestry, irrigation, watershed management and rural development.

It has provided food for school feeding programmes and other schemes to supplement the meagre diets of vulnerable groups such as women and children.

Before India achieved food self-sufficiency in the 1970's, the Programme also provided emergency food aid in times of disaster, but India no longer requires such assistance.

WFP food assistance to India supports the country's infrastructure and human resource development, provides food to the most needy in the land and helps them to improve the quality of their own lives while contributing to their nation's progress.

The Programme's cooperation with India goes back 25 years to the first year of the U.N. organization's operations. WFP was set up by the United Nations and the Food and Agriculture Organization as an experiment in multilateral food aid and began operating in 1963. Three years later, at the end of 1965, an evaluation mission which reviewed the 148 projects assisted by WFP until then recommended that the Programme be made the permanent food aid organization of the United Nations.

WFP has justified that confidence in its capabilities by supporting development and coping with emergencies throughout the world until it has grown to become the second largest source of assistance in the U.N. system after the World Bank and its affiliates.

Higher productivity for faster industrial growth

Nirmal Ganguly

Industrial growth of any country is linked to productivity which is one of the basic themes on which our Seventh Five Year Plan is based. In this article the author stresses the need to raise productivity in all sectors of economy to enable India emerge as an important industrial power. This calls for greater involvement of the management, the employees, trade unions and the people at large. Greater efficiency in the management of existing resources and assets; better project planning by industry; effective management of the energy sector and full exploitation of the favourable industrial policy are the means suggested by the author to attain the goal.

THE IMPORTANCE OF PRODUCTIVITY in promoting industrial growth is evident from the fact that productivity happens to be one of the basic themes on which Seventh Plan is based. The need for raising productivity in all sectors of economy in view of the growth-oriented industrial policy package, which have been initiated during the last few years, has become all the more important in order to enable the country to emerge as an important industrial power and to penetrate into the international market in an effective fashion.

Quite logically, therefore, the productivity movement in the country needs to be further strengthened through greater involvement of the entrepreneurs, engineers, scientists, trade unions, workers and the people at large.

The concept of productivity

The concept of productivity has come into much greater prominence during the recent years and has assumed great importance and significance in the context of industrial development. If the same production inputs can be used more efficiently, the net addition to the total national product will be much higher which will result in the process of industrial growth. In fact, higher production, greater consumption and better quality of life are possible only through raising the level of productivity. In this regard Prof. Harrod has quite appropriately stated that there is no shortcut to economic growth except raising the productivity ratio.

Whereas the improvement of productivity is of practical relevance to all countries, it is a crucial factor in the economic planning and development of less developed countries which suffer from paucity of capital resources as also trained scientific and technical manpower. It is also important to bear in mind that economic growth takes place due to rise in productivity. But economic growth will not be complete without a welfare angle added to it. The quality of life or standard of living is an important component of higher productivity. For promoting rapid economic development, the policy maker must try to achieve the twin objectives of increasing productivity and raising the quality of life. This is so because, if the rise in productivity is not transmitted to the factors of production which are responsible for higher productivity like labour, higher productivity cannot be sustained over a period of time.

As the cost of labour forms a significant portion of the total value of a manufactured item, the input of labour is more easily measured than that of other factors and as information on such matters like employment is more easily available in the required details, productivity of labour can be measured with less difficulty. However, in the measurement of labour productivity, the skill and quality of the worker many a time do not get properly projected.

As mentioned earlier, productivity is generally implied in the sphere of economic activity as the ratio of output to input. This means that in oder to produce a product or a service in a particular sector, certain resources would have to be employed in the form of inputs so as to obtain certain amount of output and productivity takes into consideration both these aspects simultaneously. The higher productivity can be considered as efficient use of the inputs for producing

certain amount of output. Peter Drucker, likewise, defines productivity as "that balance between all factors of production that will give the greatest output for the smallest effort". Thus, in technical terms, productivity is defined as the ratio between output and input.

It is also required to be borne in mind that productivity in turn, is determined by a number of factors such as the supply of educated and energetic labour, availability of raw material, quality of capital assets, level of infrastructural facilities, entrepreneurial initiative, management techniques followed, production system, prevailing economic policies, social and psychological attitudes of the people and the socio-economic condition of the masses.

Role of management

The most important step towards raising productivity is the application of productivity techiques at the plant level for the most effective utilisation of a given set of resources. In order to achieve this, Management has a great role to play. It is the quality of leadership provided by the management that induces the necessary mental attitude for increased efficiency and coordinated and cohesive action by management and labour.

The corporate sector should develop participative management to attain the willing cooperation of the employees. Informal interaction in the production process should be initiated by the Management through generation of quality circles.

The industrial units should also devise ways and means to reduce cost, eliminate waste, conserve energy, cut down delays and ensure more efficient use of capital.

It is also the bounden duty of the management to ensure that productive system ensures that the gains in productivity are also passed on to the employees thus improving their purchasing powers thereby further stimulating investment and productivity.

The captains of industry should also endeavour to convince its employees to realise that the productivity is not anti-employment or anti-labour.

The industrial units should be able to impress upon the workers that achieving of economies of scale and large scale production envisage ancillarisation of industry and when specialisation comes to stay, then it is quite obvious that the end-product of one unit will become the input for another unit. Thus productivity growth and economies of scale will result in greater employment in the long run.

Role of trade unions

It is quite logical that apart from providing good working conditions, it is desirable to give to the workers a reasonable economic incentive. Concrete measures, therefore, be adopted for sharing the gains of productivity. But trade unions must realise, at the same time, that rise in money wages without rise in productivity gives rise to stagnation of the economy and leads to accumulation of inflationary tendencies. Therefore, a rise in wages will have to be followed by rise in real productivity or output per unit of labour and then only the real benefit of wage increase will be enjoyed by the working class. The trade unions, therefore, should accept the importance of productivity as an instrument of national progress. Therefore, a climate of industrial peace and discipline is required to be brought about through reaching of productivity agreements at the corporate level. in both public and private sectors.

It is also important to realise that trade unions have a very broad and educative role to play in order to bring about the real improvement in the quality of life of the workers. Therefore, the trade unions must take greater interest to educate the workers and mentally as also emotionally prepare them for the purpose of participative management. The management should also sponsor the workers for training programmes to upgrade their scale and knowledge. This also involves stupendous efforts and coordinated action on the part of all concerned-management, workers, as also organisations like the National Productivity Council.

Inculcate productivity consciousness

There cannot be any two opinon about the fact that in order to make productivity as an effective instrument of industrial growth it is extremely necessary to inculcate a feeling of productivity consciousness among the masses and thereby making productivity a way of life. This can be very well done in our academic institutions by educating the young people from the very formative stages about the importance of raising productivity and eliminating waste in all realms of our life. The technical and engineering colleges also require to fully equip their students about the use of modern techniques of production management, human relations, marketing etc. Accordingly, the universities, technical institutes and institutes of management would require to give a new orientation to their various programmes so as to adequately respond to the productivity needs of our industrial economy.

Quality counts

It is a recognised fact that over the years of planned development, industrial structure has been greatly diversified. During these years, the country has made significant progress in the industrial sector with industrial production going up by about 8 times, giving an annual compound growth rate of around 6 per cent during the Plan era. But we must admit that our cost of production is significantly higher than many of the advanced economies and as a result we face tremendous competition in the international market because of higher cost. Another reason is that in terms of quality and adhering to technical specifications, our products are generally not at par with the best ones in the world. The race of competition is fast obliterating the feeling of a sheltered market in the minds of Indian entrepreneurs. Therefore, there is a need to bring down

[illegible] standards. Productivity does not merely mean quantity increase but also significant improvement in quality.

Capital productivity

It is also important to mention that in order to make productivity as a very potent instrument of industrial growth, it is essential to improve both labour productivity as well as capital productivity. But for improving capital productivity the active cooperation of the labour is also required. Capital productivity assumes great significance because there appears to be inefficient use of capital and as a result the capital output ratio in the country is much higher than in many of the advanced industrial economies.

It is pertinent to mention here that without greater efficiency in the management of existing resources and assets created at a huge cost in the course of nearly four decades of planned development, it would be difficult to generate adequate resources for stepping up investment. In order to ensure more efficient use of capital, any increase in capital output ratio needs to be arrested. This can be very well done by reducing time and cost over-runs through better project planning and implementation by the industry.

There is also a great need to establish appropriate and effective linkages among research laboratories, research institutions, universities, engineering colleges like IITs and other user organisations like companies and factories. But corporate sector also will have to spend a larger share of their sales turnover on R&D efforts to develop indigenous capabilities for raising productivity.

The energy sector

Effective management of the energy sector is a very important component towards productivity improvement. The major need is to reduce the rate of growth of energy consumption in relation to growth in national income. There is also need to substitute coal and electricity for oil through appropriate technologies and to manage supply and demand by formulating suitable policies. Inter-fuel substitution possibilities also require to be explored. Systematic attention also needs to be paid towards conservation of energy and incorporating them in overall corporate plans of the industrial units. The Research and Development and application of science and technology have an important role to play in achieving this goal. Moreover, increasing the capacity utilisation and increasing the productivity efficiency of capital already created has to be the main thrust of our energy strategy. In this regard, it is also necessary to mention that there is a need to further strengthen and revamp the State Electricity Boards so that they can function in a viable manner.

Industrial policy initiatives

The industrial policy of the country has witnessed a wide ranging growth-oriented industrial policy initiatives [illegible] designed to promote industrial growth, [illegible] industrial procedures, enhance the level of capacity utilisation, improving the quality of products and raising the productivity. The various policy initiatives taken during the last few years include raising of licensing limit from Rs. 3 to 5 crore, reendorsement of industrial capacity, raising the limit of MRTP companies from Rs. 20 crore to Rs. 100 crore, enlarging the list of Appendix I Industries, de-licensing as many as 30 industrial groups, broadbanding of as many as 35 industries, laying minimum economic scale of production in case of 72 industries, exempting 79 industries under Section 22-A of MRTP Act and raising the investment limit from Rs. 20 lakh to 35 lakh in case of small scale sector and Rs. 25 lakh to 45 lakh in case of ancillary sector. This has provided a congenial and growth-oriented industrial climate for raising productivity. But it is also very necessary that both the captains of industry and the workers take full advantage of this favourable industrial policy environment and contribute their very best in improving productivity so that India can emerge as a major industrial force in the world in the near future.

Conclusion

In epilogue, it may be stated that productivity is a major and important instrument for accelerating the pace of industrial progress in the country. India, with its diversified industrial structure, wide ranging capital base, vast reservoir of trained scientific and technical manpower and a capable class of entrepreneurs, is eminently poised for achieving a level of productivity comparable to that of industrially advanced nations of the world. The need of the hour is to create congenial organisational values, goals and practices in our industrial units, thus creating a right climate for higher productivity. In this process, the active cooperation of management and workers and development of participative culture occupy the first priority.

There is a great necessity for building up an environment conducive to productivity improvement, technological change, avoidance of waste and better utilisation of existing capacities. Quite obviously, a culture of higher productivity and higher quality has to be accepted as a way of life and should be promoted as a national philosophy. Similarly, productivity audit, including energy audit, should become a standard practice to identify areas of sickness and devise remedial measures. This will enable better utilisation of such factors as energy, skills, raw material and capital. There is also a need to devise action plans to improve productivity in heavy and basic industry, consumer goods industry and services sector, both at national and enterprise level.

If all these suggestions are sincerely put to practice, then there is no doubt that the country will be able to achieve higher productivity and higher rate of industrial growth, thus enabling India to emerge as a major industrial force in the world industrial map. ☐☐

Rural electrification—then and now

R.S. Shukla

Rural electrification has made a big dent down through the Five Year Plans. The advent of Rural Electrification Corporation (REC) in 1969 with its liberal policies and well planned programmes has given it a further fillip and has helped in bringing about a welcome change in the social fabric of the rural areas. It has already touched the 80 per cent mark. Determined efforts and large allocation, are bound to rocket it to the cent per cent mark before the turn of the century.

RURAL ELECTRIFICATION HAS NOW BEEN recongnised as one of the most important ingredients of the infra-structure of development. The advent of electricity not only accelerates the pace of development but also provides vast opportunities of utilising local talents and resources. As an important catalyst, electricity makes villages more liveable and rural occupations more productive and attractive. Apart from helping to increase production and productivity of the land through optimum exploitation of groundwater resources, it makes available modern means of communication and information and thereby broadens the outlook of the village folk and inspires rapid socio-economic transformation.

A major factor

Rural electrification programme in the country was initiated in early fifties. Before this, the number of electrified villages was negligible, as the main accent of electrified villages was mainly on urban centres. The potentials of electricity were formally recognised in the First Plan (1951-56) document, which admitted it as a major means of change in rural areas and substantial factor in increasing productive potential in agriculture, small and cottage industries and in helping to contain the exodus of rural population to cities.

Shift in emphasis

During the Second Five-Year Plan, the target of rural electrification was to electrify all the medium and large towns having population between 10,000 and more. It was emphasised that the development of small towns was essential for development of the adjoining rural areas. The Third Plan set an objective to develop small-scale industries in small towns and in rural areas with a view to increasing employment opportunities, raising income and living standards and developing a balanced rural economy. The subsequent Plan influenced the evaluation of rural electrification policy and viewed it generally as a programme to make electricity available in villages for domestic purposes and industries. However, a fresh look on rural electrification became necessary when a series of droughts occurred towards the end of the Third Plan. Energised pumpsets were considered to be a major step in mitigating the pinch of monsoon failure.

Significant change

The Fourth Plan brought about a significant change in the emphasis on rural electrification programme. Pumpset energisation and setting up of rural electric cooperatives became the focal points. For the first time, the allocation of rural electrification programme was enhanced substantially, representing over 18 per cent of the total allocation for the power sector.

Rural Electrification Corporation

In view of the country's experiance during the drought-periods of sixties, it was decided that the focus of rural electrification should thereafter be on energisation of pumpsets for obtaining self-sufficiency in food production rather than electrification on houses and street lighting. In this background as also to give a boost and direction to the rural electrification programme, a national development financing agency—Rural Electrification Corporation (REC)— was set up by the Government of India in 1969. The main objective of this Corporation is to finance rural electrification schemes throughout the country ensuring efficient allocation of its funds by following sound policies, procedures and criteria for formulation, approval and implementation of such schemes. The Corporation follows project approach and coordinates electrification with other inputs in rural development to achieve better agricultural production and speedier economic development. In pursuance of its objectives, REC has structured its loan policies to ensure accelerated development of economically backward areas.

Great fillip

The advent of REC with its liberal loan policies and well planned programmes, has given a great fillip to rural

electrification in the country. The level of rural electrification has since risen from a mere 13 per cent at the time of setting up of this Corporation to around 74 per cent now. Similarly, the number of energised pumpsets, which stood at just 11 lakh or so at the time of formation of this Corporation, has now crossed to 76 lakh mark.

Major contribution

During the last 18 years of its dedicated service to the nation, REC has made significant contribution to the rural development by promoting and financing rural electrification throughout the country. Systematic planning of rural electrification has been the principal feature of its operations to achieve optimum utilisation of agricultural potential and other resources in rural areas. It has so far sanctioned 16,522 well-formulated schemes and approved financial assistance of over Rs. 5,050 crores. Its schemes envisage electrification of 3,42,346 villages and energisation of 40,46,722 pumpsets besides release of millions of domestic, industrial and other service connections.

Eight states electrified

Progress of rural electrification during the current Plan period will be remembered as a significant milestone on way to cent-per-cent rural electrification of the country. As a result of 'Operation Electrification', four more States completed the work of electrification of all their villages. These are Himachal Pradesh, Nagaland, Karnataka and Gujarat. It was for the first time that the total electrification of villages in four States could be brought about in a single financial year in 1987-88. In Gujarat, electricity has already been extended to all the villages (as per 1971 census) excluding 5 villages, which are located in the protected forest areas. With the liberal financial assistance and strict monitoring of the projects, 5.4 lakh new pumpsets were energised during 1987-88 against the target of 3.7 lakh. To mitigate the suffering of the farmers because of failure of monsoon, another 2.80 lakh inoperative pumpsets were made operational. Additionally, 20, 395 villages were electrified during the year under REC projects exceeding the target by 13 per cent.

Decentralized generation

Of late, REC has taken steps to help electrify far-flung and remote areas through decentralized renewable energy sources including mini/micro-hydel projects and gas-based stations. As a matter of policy, REC has been according priority to the development of backward and tribal areas and regions with a majority of the weaker sections of the society.

RE cooperatives

It has promoted 48 rural electric cooperatives mostly in backward and remote areas for decentralised distribution of power and also for soliciting consumer involvement in management of power distribution. On the technical side, the Corporation has been involved in improving system efficiency of the power distribution network in rural areas and to help State Electricity Boards in increasing efficiency and reducing line losses. It has evolved and issued over 200 standards covering important equipments and materials for rural electrification. Human Resources Development, promotion of non-conventional energy sources and energy conservation are other fields where REC has been making significant contribution.

Impact on rural economic development

Rural electrification has brought about a welcome change in the social fabric of the rural areas with special reference to the economic structure, living style and outlook of the village people. The rapid spread of television and radio network and modern means of amenities were possible because of extension of electricity to the new areas. There has been a steep increase in consumption of energy in industrial and agricultural sectors. Millions of pumpsets have churned water for irrigation in the villages. Agricultural production has increased and cropping seasons are extended because of availability of a dependable source of irrigation. Unemployment has decreased because of greater agricultural activity. The potential for small-scale and agro-based industries has tremendously increased.

Covering all villages

Rural electrification has made a big dent during the 40 years of freedom. Electricity is now available to almost 80 per cent of rural population in 4.27 lakh of the total 5.76 lakh villages of the country. With determined efforts and larger allocation, the country is poised to achieve 100 per cent electrification of villages and exploitation of the remaining pumpset potential well before the turn of the century. □

(Courtesy: R.E.C. New Delhi)

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(Contd. from page 9)

by the community and the construction of percolation tanks which would provide life-saving irrigation to crops when an extended dry spell occurs during the crop growing season.

What past experience says

The past experience, however, shows that the importance of dryfarming gets highlighted when there is a drought but is forgotten very soon. Even during the drought periods, the emphasis often shifts to irrigated areas for finding a quick solution to the problem of food deficit as it is easier to step up crop productivity in such areas by using costly inputs. Recourse to such an easy solution of the problem seems to have been taken even during the latest drought of last year. The action plan for pushing up grain output to 175 million tonnes by 1990 envisaged concentration of efforts and resources in 169 selected districts in 14 states. Not many of these districts are in the dryland zones.

It is in this context that one can really appreciate India's move to have dryland farming as the theme for this year's World Food Day. The move should indeed be deemed to have paid off if it succeeds in its goal of bringing rainfed farming in sharp focus. □□□

Rural electrification; issues involved

N.S.S. Arokiaswamy

The article is an analysis of the economic, social, political, policy and planning issues involved in rural electrification in India. Power Boards, says the author, must be economically viable for the success of rural electrification. To this end he suggests means for structuring of power supply tariffs and concludes recommending the setting up of Rural Electric Cooperatives for proper distribution/maintenance of power to rural India.

AS THE MOST CONVENIENT FORM OF ENERGY made available by Power Boards for ready use at the doorsteps of the users and that too heavily subsidised, power is highly sought for irrespective of the costs incurred to deliver it. Unfortunately, Rural Electrification is highly capital intensive job with mostly negative return on investments. We are a developing country with one third of our population still below the poverty line. The uplift of the poor needs lot of money to be spread over several activities like food for survival, place with minimum comfort to live, minimum clothing, an employment, medical facility, roads and pathways, cleaner surroundings, drinking water etc. We cannot spend heavily on any one activity. Simply because the Power Board has a social obligation to help the weaker section by extending supply to rural areas, it cannot be stretched to the extent of ruining the organisation itself, and seriously affecting its ability to deliver adequate, reliable and good quality power supply to all its consumers and grow also. It cannot become a liability on the public exchequer by incurring heavy operatinal losses. The political system should not misuse it to spread its own popularity with the people, and for providing employment. Let us analyse how the Power Boards can be enabled to systematically extend power supply to rural areas and fulfil to the extent power supply to rural areas and fulfil to the extent possible its social obligations without seriously hampering its own growth.

Lift irrigation costs

A farmer taking a loan of Rs. 15,000/- from a bank at 12 per cent interest rate for installing an electric pumpset of 5 HP will have to pay yearly an interest of Rs.1800/- and spend another Rs. 600/- towards its maintenance inclusive of rewinding motor coils once a year when it burns due to low voltage. But the annual payment to Power Board is between Rs.250/- to 375/- only in the Southern States. This works out to only 11 to 16 percent of the earlier mentioned expenses. Hence, jointly using the same pumpset with other marginal farmers or getting loan at a reduced interest rate would benefit him very much more than heavily subsidised power supply. But the clamour for still cheaper power arises because other famrers are enjoying surface irrigation waters at much lesser costs.

A time has come for the Governments to restructure these charges for surface as well as lift irrigation, so that the power as well as irrigation utilities grow healthily wihtout heavy losses and generate also internal resources for further investments. There are several otherways of helping the farmers. Subsidies will have to be selective and not stretched too far to ruin these utilities themselves.

Each pumpset may create a peak demand of about one K.W. in the grid, and for taking this power to the rural areas it may cost the Board about Rs. 30,000/-. The annual realised revenue of Rs. 250/- to 375/- is less than 2 percent of investment. During 1984-85 in T.N.E.B. the weighted average accounting cost of L.T. power supply was 86 paise per unit, whereas the average rate of revenue realisation from pumpsets is only 16 paise which is less than one fifth of cost. It appears essential that Power Boards enforce a minimum return on investments to arrest the galloping annual operating losses. Unfortunately T.N.E.B. is seen to be connecting up even one pumpset in the order of priority even if it were to entail running upto one K.M. of line and erecting a new distribution transformer at a cost of even Rs. 50,000/-.

Multifarious uses of electricity

Is not a stage by stage, intensive and not extensive rural electrification programme, connecting up several services including pumpsets and rural industries in already electrified areas and putting electricity to intensive uses by far better than unproductive use of larger quantum of materials to reach far flung low load density isolated areas ? Cannot the latter be serviced at much lesser investment by decentralised small energy sources like wind mills, diesel pumpsets, biogas plants, micro hydel etc. The dencentralised energy users of these areas could be given preferably soft loans, at lower interest rates with long repayment period. It would seriously affect growth

[illegible] on [illegible]. Lifting water for irrigation and domestic needs by electric pumpsets instead of diesel pumpsets will save precious diesel oil for the country. Lighting the streets, homes and offices by electricity will save precious kerosene oil otherwise needed. Saving diesel and kerosene will reduce imports and save foreign exchange for the country. But they have to be accomplished economically.

Over exploitation of ground water

About 60 lakhs of electric lift irrigation pumpsets are now operating in the country. Over exploitation of ground water resources are prevalent in parts of states like Haryana, Tamil Nadu, Maharashtra etc. Further ground water potential to connect up another 60 lakhs of lift irrigation pumpsets have also been located. Adequacy of ground water should be insisted by certificate from competent authority before even accepting applications for new lift irrigation pumpset connections, as heavily subsidised electricity should yield adequate additional food or commercial crop for the country, or avoid alternate possible use of diesel oil, which is still considerably imported. Also farmers should not be allowed to circumvent the rules by misrepresenting that they were earlier using diesel pumpsets. An 'open book system' of exhibiting such applicants in notice boards and calling for objections will easily put an end to all frauds, provided there is a political will to really eliminate corrupt practices.

Restrict subsidised power supply

Small and marginal farmers only, duly identified, need subsidised power supply, It is not difficult to, identify them correctly provided the 'open book system' publishing lists of such weaker sections in notice boards are adopted and details for corrections and additions are also invited. Subsidy looses all sense and leads to waste and misuse of money and power, if power is sold at less than half the cost to even weaker section. The Power Board will also become a financial wreck. There are several other ways of helping these farmers like ensuring reasonable price for farm outputs, subsidised sale of other farm inputs, creating better marketing and cold storage facilities for farm products and storage as well as transport facilities for them have to be resorted to. Installation of additional pumpset in the same well by shareholders, or setting up a second pumpset to irrigate the same extent of land are preferably billed under industrial tariff, as supply of subsidised power for these vanity uses make no sense. Why should not all rich farmers, paying income tax to Government of India, be billed under industrial tariff for their lift irrigation pumpsets?

Joint lift irrigation

Joint lift irrigation by a few marginal farmers will obviously enable economic farming feasible by them. In addition, it reduces overall peaking power requirement, reduces line losses and reduces capital investment needed on line extensions to raise same quantum of food, all resulting in economic survival of the Power Board. It should be encouraged by [illegible] subsidised power supply to such group of small and marginal farmers, and by releasing them from all contractual obligations for the consequently disconnected pumpsets. Unless these benefits are widely advertised and explained, farmers may not appreciate them. Government Lift irrigation schemes are also highly beneficial to both Power Board as well as farmers alike in areas of larger water availability.

Need for regular supply

A power Board working at a huge operating loss cannot have sufficient money and materials to invest on system improvements to maintain an uninterrupted good quality power supply. Due to low voltage, lift irrigation motor coils get burnt several times every year, each time needing about Rs. 600/- for rewinding and reservicing. Due to excessively high voltages at dead of night, the filament lights at pumpsheds, homes, streets and pathways blow off. Every replacement costs over Rs.6. Due to frequent power supply interruptions, a man has to be kept at the pumpset watching for resumption of power supply to restart it. The crops get withered especially during summer months due to failure of motors and transformers, or interruption continuing for long period. These annual losses are several times the meagre payments being made to Electricity Board.

Metering and billing

Unmetered power supply leads to waste and misuse of both power and water, the country's two most precious resources. A pumpset with less friction footvalve, lesser friction hard PVC suction and delivery pipes of correct sizes, and required good quality shunt capacitors to take power factor to nearer unity, correctly connected across motors after the starter, would all need only about 10 per cent more money, but would save not less than 30 per cent of power to be consumed. The farmers are not interested in all these energy efficient installations as the supplies are not metered. In a few cases where the installations as the supplies are not metered. In a few cases where the installations were improved at public expense by R.E.C. or Power Board, the farmers have even replaced the regid plastic pipes with the earlier used G.I. pipes for convenience of shifting pumpsets easily to different levels and for climbing up and down the well safely, Why does the Government not legislate to enable Power Board denying supply to energy inefficient installations? Why perpetuate the waste of precious power? Why are the Power Boards not directed programme, and the Power Boards not directed by Government to reintroduce meters, may be as a phased programme, and introduce a two part scientific tariff? The fixed charge of rupees per HP per year or month will proportionately recover the capacity related power costs, and the rate in paisa per unit consumed will recover proportionately the energy related component of power supply costs? A ridiculously low flat rate or even free power supply is not going to really help them. On the contrary, it will ruin the farmers as well as the

Power Board, as supply will be erratic and of bad quality.

Lighting

Electricity is the cheapest and most convenient form of energy for lighting purposes. Lighting benefits will get extended at minimum cost to maximum number of people belonging to weaker sections, if all streets, pathways and public places of all slums, hutments and harizan colonies are systematically lit up, and lighting system also maintained properly. Instead of doing this, states like Tamil Nadu, Andhra Pradesh etc. are giving free lighting supply to private huts. These Power Boards connect up free of cost a 40 Watts bulb at public expense in a hut assuming that it will burn daily for about 5 hours and consume about 6 units every month. But it is replaced immediately by a higher voltage bulb and burnt for several hours daily. Tapping power and misusing it is not also uncommon as law and order situation is not satisfactory. Power supply to all huts and even small homes for the initial slab of power usuage must be subsidised. But free or unmetered supply will land the Board into heavy operating losses. Precious power whose cost will steeply rise in the coming decades cannot be supplied unmetered, wasted or misused. At lesser cost to public exchequer proper public lighting, drinking water taps, good pathways, removing periodically rubbish getting collected etc. can be extended or provided to these slums.

Rural industries and power tariffs

Dispersal of small scale and cottage industries to the rural areas makes rural electrification more productive and remunerative, apart from uplifting the weaker sections. As already stated, our aim in already electrified rural areas is to connect up several new services, before extending lines to new areas. Rural electrification being highly capital intensive productivity of investments made is important. To mobilise resources for rural electrification and to partly neutralise Boards losses, all Boards must start levying a uniform surcharge on all power consumption within corporation and municipal areas. Apart from levying tariff much higher than even the longiun marginal cost on large business and commercial premises and luxury industries, a tariff nearer the marginal cost must be levied on the second higher slab of power consumption in all bigger homes, bungalows and larger shops. But the subsidy for rural industries cannot be stretched too far to land the Board into financial problems, or make it getting scared about rural industrialisation.

Restrict hours of supply

The most effective way of reducing line losses and increasing considerably capacity utilisation of entire power system investments is to reduce peak demand occurring in the entire power system starting with L.I. lines and ending up with generating stations. The hours of supply to L.I. pumpsets are also restricted. For restricting the hours of power supply during day time or even during eveing hours, most Power Boards are now switching off the L.T. 11 K.V feeders in the [illegible] or give single phasing supply on them. The former method deprives the domestic and commercial consumers including hospitals, schools use of power supply during those hours. The latter method damages the equipments due to overloading and unbalanced voltages. Equipments for discretely converting single phase to three phase supply have also become common.

Voluntary compliance scheme

For this ideal scheme about half the capacity of pumpset on every L.T. feeder is given the group symbol A and the rest the group symbol B. The symbol is painted prominently outside the pumpset cover and pump room. Both the lists with relevent details are exhibited in the notice boards of several public offices of power utility and local authorities for the public to monitor their running hours. The group A pumpsets will have to avail supply only in the forenoon in the first fortnight of all months, and in the afternoon only in the second fortnight of all months. The group B pumpset, will have to avail supply only in the afternoon in the first fortnight of all months, and in the forenoon only in the second fortnight of all months. Both the groups will not take any supply between 6 to 10 P.M. on all days thus avoiding the evening lighting hours. But all are free to avail simultaneously power supply after 10 P.M. to 6 A.M. the next day if needed. The public are given incentive to report violations. Any violation will seriously affect the quality and reliability of power supply to all the pumpsets, and will be punished by disconnections or heavy penalty. There will be large financial saving to the utility by nearby doubling the capacity utilisation of entire power system investments of L.T. feeders. The load demand curve gets flattended and entire power system losses get drastically reduced. Naturally power cost will also get reduced benefitting all consumers alike. In Rural Electric Cooperatives the consumers are the shareholders of the utility. Naturally the chances o this scheme succeeding is maximum there if enforced after due publicity.

Rural electric cooperatives

Rural Electric Cooperatives for distribution of power supply, to rural areas will give a sense of ownership, participation and accountability to all consumers in the area, who should be compulsorily enlisted as their members. If a proper advertisement is made about their rights and responsibilities, it is easy to obtain their full cooperation in plugging revenue leakages due to wrong metering, billing etc, controlling thefts and pilferages of power, enforcing proper restriction in hours of supply to pumpsets, peak hour restriction on industries etc. The financial losses due to rural electrification will get reduced for Power Boards if they entrust distribution of power in rural areas to cooperatives. Their operational and monitoring expenses will obviously be more if they do all the works mentioned earlier with their unionised urban based workers on high wages. The Cooperatives will be able to canvass intensive load growth much quicker. Productive measures like spot and card billing systems, meter reading once in 2 or more months for

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Rural electrification in Andhra Pradesh

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In this article the authors attempt a study of rural electrification in Andhra Pradesh, where it was initiated as a planned programme during the 1950s. In this agrarian state with nearly 77% of people living in villages, rural electrification hastens the pace of development. The authors, therefore, advocate for accelerated electrfication and pump energisation. They sum up by analysing the problems of rural electrification in the state and suggesting future measures.

IN THE EARLY STAGES, THE EMPHASIS on electricity was more as a social amenity rather than as a development input. Now it is recognised that it plays a vital role in triggering rural development. Further an adequate power infrastructure is a natural pre-requisite for rural industrialization and rural social services apart from agriculture. Electricity has the added advantages of varsatility economy, cleanliness, operational ease and convenience for different purposes. It also helps in the overall improvement in the quality of life of rural masses.

The popularity of electricity as an input in agriculture can be gauged from the estimate that the share of electricity consumed has gone up from 11 to 38 per cent of the total commercial energy consumed between 1953-54 and 1978-79 and that of oil declined from 89 to 62 per cent during the same period. The elasticity coefficient of electricity in relation to GDP is greater than that of oil and coal. The alternative sources of energy which can be used only in farflung, remote, inaccessible and sparsely populated areas with prohibitive cost are at the experimental stage. There is a need to contain the outage of foreign exchange on oil imports. These factors have turned out electricity to be the choice input among all the commercial sources.

In Andhra Pradesh, nearly 77 per cent of population lives in villages with agricultural orientation. Thus rural electrification is a catalyst for accelerating the pace of rural development. Therefore, energy forms a major policy-parameter in developmental efforts. Recognising the vital role that the electricity plays in increasing agricultural production and fostering the growth of rural industry, rural electrification, as a planned programme was initiated in Andhra Pradesh during 1950's. An attempt is made here to study the progress of rural electrification in the state.

Plan outlay and organisational support

Plan outlay on rural electrification has increased progressively from Rs. 57.48 crores in the Fourth Plan to Rs. 260 crores in the Seventh Plan (Table 1). However, its share in the Power sector has dwindled during the period. For example, Fourth Plan showed the highest (29.2 per cent) while the lowest (12.1 per cent) in the next plan. The outlays are supplemented by the Rural Electrification Corporation.

The primary burden on carrying out the rural electrification programme rests on the Andhra Pradesh State Electricity Board (APSEB). The rural electric cooperative societies are distribution power in the rural areas. There are ten such societies spread over 9 districts such as Medak, Karimnager, Nizamabad, Cuddapah, Chittoor, Ananthapur, Nellore, Vizianagaram and Visakhapatnam.

Table 1

Public Sector Outlays (Rs. Crores).

Plan	Power sector	Rural Electrification	% of Col. 3 in Col. 2.
1	2	3	4
Fourth Plan (1969-'74)	197.12	57.48	29.16
Fifth Plan (1974-'78)	391.99	47.42	12.10
Annual Plan (1979-'80)	154.60	44.52	28.80
Sixth Plan (1980-'85)	789 70	130.00	16.46
Seventh Plan (1985-'90)	1500.00	260.00	17.33

Source : Relevant Five Year Plans of Government of Andhra Pradesh.

Village electrification and pumpset energisation

In the state, there are 27,380 villages and 32,750 hamlets as per 1981 census. According to Seventh Plan, the estimated potential in terms of agricultural pumpsets for energisation stood at 15 lakhs. The

programme of village electrification and pumpset energisation is undertaken in a big way and as a result the number of electrified villages and energised pumpsets was raised from time to time since the beginning of the First Plan as shown in table-2.

The share of villages electrified out of the total number of village has gone up from a mere 0.72 per cent at the commencement of the First plan to 90.7 per cent by March, 1987 and is likely to reach 100 per cent at the end of March 1990. The percentage of energised pumpsets out of the total exploitable potential rose from 0.04 to 55.22 during the same period and may touch 66.41 at the close of March, 1990. The villages to be electrified during the remaining period of Seventh Plan are mostly tribal and in some of the villages the population is less than 100.

Table-2

Plan-wise Progress of electrified vilalges and energised pumpsets.

Plan	Village electrified		Pumpsets energised	
	Nos.	% of census villages	Nos.	% to estimated potential
1	2	3	4	5
Pre-plan	197	0.72	620	0.04
First Plan (1951-56)	630	2.31	4300	0.29
Second Plan (1956-61)	2680	9.85	17968	1.20
Third Plan (1961-66)	4533	16.65	57225	3.82
Three Annual Plans (1966-69)	5788	21.26	123167	8.21
Fourth Plan (1969-74)	10485	38.52	261989	17.47
Fifth Plan (1974-79)	14851	54.56	345302	23.02
Annual Plan (1979-80)	16659	61.20	388292	25.89
Sixth Plan (1980-85)	22851	84.00	646212	43.08
(1985-86)	23785	87.38	733534	48.90
(1986-87)	24690	90.70	828342	55.22
Seventh Plan (1985-90)	27221	100.00	996212	66.41

Source: For 6th and 7th plans, See Govt. of India, *Seventh Five Year Plan 1985-90*, New Delhi, Planning Commission, 1985, pp. 163 and 164 (Vol. 2); and for others see Govt. of Andhra Pradesh, *Seventh Five Year Plan 1985-90*, Hyderabad, Finance and Planning Department, 1986, p. 254, (Vol. 2).

The hamlets have distinct characteristics of villages and have separate panchayats in many cases. These are away from the main villages and contain over 30 per cent of rural population. Some of these are even bigger than the main vilages 12,801 or 39 per cent of existing hamlets were electrified by March, 1987. It is anticipated to electrify 5000 hamlets additionally by 1990. It may be observed from the table that the growth was very much encouraging, as the percentage went up remarkably. Moreover, there was a metamorphic change particularly from the beginning of the three annual plans.

There are wide fluctuations in the yearly growth between 1980 and 1986 especially in village electrification The highest percentage of villages were electrified in 1980 while the lowest in 1987 over the respective previous years. Further, there is a declining trend in the progress in recent years compared to early 1980s. With regard to the energised pumpsets, the year wise growth has come down gradually from 12.45 per cent in 1980 to reach the lowest 8.66 per cent in 1984 and subsequently sose to record the maximum 13.51 per cent during 1986 again marginally fell in the following year to show 12.92 per cent. It may be observed that the progress got retarded in the recent past.

Table 3

Year-wise Progress in village electrification and pumpset energisation.

Year	No. of villages electrified	% of increase over the previous year	No. of pump-sets energi-sed.	% of increase over the previous previous
1	2	3	4	5
1979	14851	—	345302	—
1980	16659	12.17	388292	12.45
1981	17754	6.57	436746	12.48
1982	19190	8.09	486658	11.43
1983	20661	7.67	535773	10.9
1984	21661	4.48	582197	8.66
1985	22851	5.49	646212	11.00
1986	23785	4.00	733534	13.51
1987	24690	3.81	828342	12.92

Source : Relevant Five Year Plans of Andhra Pradesh and India.

The progress achieved so far has been impressive in aggregate terms though there are sharp inter-district differences (Table-4). All the inhabited villages were electrified in the districts of West Godavari, Chittoor, Cuddapah, Rangareddy, Medak, Nizambad, Karimnagar, and Nalgonda as on 31.3.1987. The percentage of electrified villages is the lowest in Vishakapatnam (46) among all the districts of the state. More than 90 per cent of villages were electrified in the remaining districts. The electrified villages are 99 per cent in Rayalaseema, 98 per cent in Telangana and 81 per cent in Coastal Andhra. The fully electrified districts were found to be five, two and one in Telangana, Rayalasseema and Coastal Andhra respectively. About 50 per cent of census hamlets were electrified in the districts like Nizamabad, Guntur, Krishna, Rangaeddy, Kurnool, Nellore, Prakasam and Medak by March 1987. The electrified hamlets were in the order of 38 to 48 pet cent in each of the districts such as chittoor, Ananthapur, Mahabubnagar, and Karimnagar. In the rest of the districts less than one third of the existing hamlets were electrified. The percentage of electrified hamlets were higher in Rayalaseema followed by Coastal Andhra and Telangana. Further, the districts with maximum and minimum percentage of electrified hamlets were seen in Telangana alone.

The number of energised agricultural pumpsets are more in Karimnagar (102200) followed by Chittoor (89562), Warangal (74642), Nalgonda (74104) etc.

Table-4

District-wise progress in electrification as on 31.3.1987

District	No. of villages electrified	No. of villages to be electrified	No. of hamlets electrified	No. of hamlets to be electrified	Pumpsets energised	Population covered by electricity*
1	2	3	4	5	6	7
Srikakulam	1748 (91.0)	173	399 (17.8)	1837	6251	2526 (89.9)
Vizianagaram	1333 (91.2)	128	256 (29.8)	605	6761	—
Visakhapatnam	1682 (45.6)	2010	356 (29.1)	874	7516	2562 (91.3)
East Godavari	1181 (89.7)	136	396 (26.9)	1083	14486	3025 (98.0)
West Godavari=	839 (100)	—	426 (37.7)	703	24892	2370 (99.8)
Krishna	940 (99.7)	2	572 (63.8)	324	19933	2494 (100)
Guntur	690 (99.7)	2	679 (71.3)	273	12041	2845 (100)
Prakasam	973 (96.6)	34	686 (55.7)	546	17279	1892 (96.5)
Nellore	1092 (96.8)	13	745 (59.1)	516	41385	1606 (97.8)
Coastal Andhra:	10478 (80.8)	2498	4521 (40.1)	6761	150644	19122 (96.9)
Chittoor	=1346 (100)	—	3356 (48.3)	3591	89562	1976 (99.7)
Cuddapah	& 870 (100)	—	892 (25.9)	2445	35314	2115 (100)
Ananthapur	983(99.9)	—	1400 (45.4)	1682	55915	1463 (99.1)
Kurnool	892 (99.7)	3	411 (64.8)	236	20245	2286 (100)
Rayalaseema	4041 (99.2)		6059 (43.0)	8044	201036	7940 (99.7)
Hyderabad	—	—	—	—	989	—
Rangareddy	949 (100)	—	241 (63.3)	140	35088	2792 (100)
Mahabubnagar	1469 (99.9)	1	251 (40.6)	367	45055	1931 (99.9)
Medak	1228 (100)	—	188 (52.5)	170	58659	1468 (100)
Nizamabad	859 (100)	—	178 (89.9)	20	58848	1304 (99.3)
Adilabad	1469 (94.4)	87	94 (8.1)	1029	13311	1201 (93.2)
Karimnagar	1051 (100)	—	348 (44.7)	430	102200	1951 (99.3)
Warangal	983 (97.9)	21	281 (25.6)	816	74642	1860 (99.4)
Khammam	1048 (95.3)	52	275 (17.7)	1275	13866	1260 (92.0)
Nalgonda	1115 (100)	—	365 (28.9)	897	74104	1820 (100)
Telangana:	10171 (96.4)	161	2221 (30.2)	5144	476762	15587 (98.5)
Andhra Pradesh:	24690 (90.2)	2663	12801 (39.1)	19949	828342	42649 (98.1)

Note : * Population in thousands as on 31.3.1985
= One village is uninhabited
& 26 villages are submersible.
( ) Figures in brackets indicate percentage to total
Source: For Col. 6, see Govt. of A.P., Statistical Abstract of A.P. 1985, Hyderabad, Bureau of Economics and Statistics, 1987, p. 165; and others compiled from the records of A.P.S.E.B.

Whereas the least in Hyderabad (989). Telangana, Rayalaseema and Coastal Andhra bagged the first, second and third places respectively. Electricity has covered cent per cent population in certain districts such as Krishna, Guntur, Cuddapah, Kurnool, the coverage ranges from 90 to 99 per cent.

The village electrification is poor in Visakhapatnam district because the tribal villages are located in rugged terrain areas. In respect of utilization of ground water resources, there is no need for undue concern over the non-uniformity of achievement amongst the districts. For instance, in districts where surface water can be provided more cheaply there is no case for going in for ground water potential. This is not however, to suggest that all regional imbalances in pumpset energisation can be fully explained on this basis. Environmental and agronomic conditions might be responsible for regional variations. Besides, the efforts put in by the districts may not be alike.

Pumpsets owned by tribals and harijans were energised and power was extended to their industrial and other services under special programmes. 760 tribal villages were electrified and 15, 724 harijanawadas were covered with street lights. Under 'A bulb for each house' scheme, one 40 W bulb is provided to each house constructed under the weaker sections housing programme. By March 1984, 40000 houses and 120 colonies were benefited by this scheme. In addition, 8000 weaker section houses were given lights.

Physical targets and achievements

It was only from the Fourth Plan onwards that specific targets in terms of villages electrified and pumpsets energised were fixed. The targets were never achieved in any one of the plans except energisation of pumpsets during the Fourth Plan (Table-5). In the case of village electrification, the achievement was 89.6 per cent in the Fourth plan, 68.5 per cent in the Fifth Plan

and 80.2 per cent in the Sixth Plan. More than the programmed pumpsets were energised during the Fourth Plan (101.5 per cent) while Fifth and Sixth Plans recorded an achievement of 75.3 per cent and 89.3 per cent respectively. In the Seventh Plan, it is anticipated to electrify all the residual villages and energise 3.5 lakh pumpsets.

Table 5

Physical targets and achievements.

Plan	*Villages electrified*			*Pumpsets energised*		
	Target	*Achievement*	*% of achievement*	*Target*	*Achievement*	*% of achievement*
1	2	3	4	5	6	7
Fourth Plan	5243	4697	89.6	136833	138822	101.5
Fifth Plan	6374	4366	68.5	110577	83313	75.3
Sixth Plan	8000	6419	80.2	280000	250000	89.3
Seventh Plan	4370	—	—	350000	—	—

Source : Relevant Five Year Plans.

Inter-State variations

In respect of village electrification, Andhra Pradesh occupied the third place among the southern states and it is far ahead of the national average (Table-6). In the case of energised pumpsets, this state stands last in the southern states and it is less than the Indian average. The state ranked third in the coverage of rural population. With 142.42 KWH per capita consumption the state holds the third position but is behind the all India mean.

Table 6

Level of electrification in Southern States (percent)

State	*Electrified villages (31 3 85)*	*Energised pumpsets (31 3 85)*	*Coverage of rural population (31 3 84)*	*Per capita consumption KWH (31 3 84)*
1	2	3	4	5
Andhra Pradesh	84.0	43.1	95.2	142.4
Tamil Nadu	99 7	103.3	99.8	178.1
Karnataka	83.1	23.5	90.4	166.2
Kerala	100.0	87.9	100.0	113 4
All India	64 0	47 5	75.1	154.1

Source : For Cols. 2 and 3, see *Seventh Plan of India*, pp. 163 and 164; and for others see government of Andhra Pradesh, Statistical Abstract of A.P. 1985, Hyderabad, Bureau of Economics and Statistics, 1987, pp. 421 and 423.

Impact of rural electrification

The impact of rural electrification on the rural economy is well established and documented. The benefit of electricity can be well perceived where agriculture has been a gamble with the dependence on monsoons. There has been a spectacular progress in the agricultural sector with an increase in the number of electric pumpsets. For example, the food grain production in the state rose from 87 lakh tonnes in 1973-74 to 104.7 lakh tonnes in 1985-86. Thus the impact of rural electrification is clearly seen in every sphere of rural activity as revealed by the findings of several research studies on the subject.

Problems

There seems to be a growing sense of dissatisfaction among the rural consumers due to interruptions in electric supply; low voltage and constant voltage fluctuations; delays in providing new services connections; wrong meter readings and consequent wrong billings; delay in attending to fuse-off calls; non-serving of bills on time; ineffective card system; and non-replacement of stuck and burnt meters. There is a criticism that the benefits mainly go to large and medium farmers despite many programmes meant for the small and marginal farmers, who rarely get their due share. There is also a wide spread feeling that the power generation capacity could not be raised for the past five years due to the misallocation of funds for populist schemes. The state which was surplus in power till 1985 became deficit as seen from frequent power cuts.

Future measures

Exploitation of minor irrigation potential demands accelerated programme of energisation of pumpsets since there is large scale untapped underground water potential. Emphasis has to be placed on the electrification of tribal and backward villages. Energisation of community irrigation wells and wells belonging to SCs and STs should constitute an important element of power programme. Assured power supply to identified growth centres for rapid industrialization should be kept in view. The State Government should earmark crores of rupees for rural electrification in the years to come and the marked funds should atleast be spent in right earnest. Other measures could include, creation of consumer service cell; on the spot billing; installation of more distribution transformers etc.□□□

(Contd. from page 23)

adjustment billing, decentralised revenue realisation and accounting, insisting on a minimum return on power supply to individuals can be more easily enforced by the local people. Power Board must also be prepared to sell power at a subsidised rate not exceeding half the cost to these cooperatives. Now their direct sale price to rural areas is very much lesser. The labour problems, political interferences and corrupt practices are more associated with a centralised urban based organisation. The Rural Electric Cooperatives mentioned earlier can also devote more attention to compliance within stipulated voltage regulation norms. They can carry out more systematically periodic rationalisation of 11 KV and L.T. network and system improvement works. If made to succeed, they will be the ideal mode of distributing power in rural areas.□□□

Equality for women- what we need doing

Smt. T.K. Sarojini

The setting up of the Bureau of Women's Welfare and Development (The National Machinery) in 1976 was a step forward in the direction of achieving equality of status for women as advocated in the Constitution. The author, in this article, elaborates the activities of this machinery and further pleads for the setting up of a proper data bank on women. She feels, proper research on the social problems affecting women and evaluation of on-going programmes could help assess the strength /weaknesses of these programmes and hasten the attainment of the goal faster.

THE CONSTITUTION OF INDIA GUARANTEES to men and women equality of status and opportunities—political, social and economic. However, in practice, women have not been able to take full advantage of these and consequently they suffer as a group and lag behind men.

Status of women-an overview

According to 1981 census women constitute 331 million in absolute numbers and represent 48 per cent of the total population of the country. A simple demographic index viz. sex ratio which gives a comparative picture of the growth of male and female population shows that there were 933 females per one thousand males in 1981 as compared to 930 in 1971. Another disquieting feature on the demographic scene is the higher infant and child mortality rates of females compared to those of males. The same is true of life at birth which is higher for males than for females. While the female infant mortality rate was 111 in 1981, the male mortality rate stood at 110. In 1971-81, the male life expectancy was estimated to be 50.9 years while the female life expectancy was 50.0 But the trend is now changing in favour of women due to better coverage of maternal and child health programmes. Despite the progress of education and social reforms, there has been, during the past several decades, very slow rise in the average age at marriage in India. For the first time in the history, the 1981 census has shown an encouraging feature that the female age at marriage in 1981 was 18.3 years as against the minimum age of 18 years set for the girls in India.

Although the literacy rates indicate that there was an increase from 18.7 per cent in 1971 to 24.8 per cent in 1981, yet the pace of progress continued to be very slow as compared to the literacy rates of men i.e. 39.5 per cent in 1971 and 46.9 per cent in 1981. A more sensitive index in this regard is to compare the female literacy rate of 18.0 per cent in rural areas with that of 47.8 per cent in urban areas, during 1981. The rate of enrolment of girls in schools is another indicator which reflected that 25.8 per cent of rural girls in the age group 5 to 9 years were attending primary schools as compared to 55.6 per cent in urban areas.

According to the latest available information, between 1984 and 1985 the Work Participation Rate (W.P.R.) of main workers for males declined by one point from 52.61 per cent in 1984 to 51.62 per cent in 1985 while for females, it increased from 12.06 per cent in 1984 to 13.99 per cent in 1985. The increase in WPR among females is shared by all age groups except the group 60 and above. Both in rural and urban areas, more females than males were reported as marginal workers, who formed a substantial proportion in all age groups among females. Among males, this proportion tapers off rapidly above the age of 25. The female WPR in urban areas has not increased much between 1971 and 1981 specially when compared to rural areas.

The data presented in the above paragraphs substantiate the opening statement that the status of women in India compared to that of the men is very low with a lot of socio-economic disparities calling for special attention of the Government to bring them on par with men so that they can become part of the mainstream of development not as mere beneficiaries but as equal partners and shareholders along with men.

The hierarchical structure of Indian society with its diverse and complex socio-economic institutions, organisational patterns and cultural values makes it difficult for uniform strategies to be equally effective with different groups. Therefore, the planned intervention launched through Five Year Plans also could not bring

forth the desired changes in the socio-economic development of women in India. The situation remained more or less the same till early Seventies. It was in 1971 that a breakthrough was made when a Committee on the Status of Women in India (CSWI) was set up to undertake a comprehensive examination of various issues relating to the rights and status of women in the context of changing socio-economic milieu in the country.

The recommendations of the Committee encouraged the Indian Government to initiate a comprehensive programme of legislative and administrative measures aimed at removing the economic and social disparities and discrimination to which Indian women continued to be subjected. Followed by this were the two important events, viz. the International Year of Women (IWY) in 1975 and the International Women's Decade 1976-85. Participation of India in these two events has given an opportunity to the State and its people to make a self-assessment of thier efforts and failures in fulfilling their commitment towards the betterment of women.

The Women's Decade in India spurred a number of activities in various sectors for the development of women. Indeed these special efforts of both Governmental and non-governmental organisation have brought forth some changes in improving the status of women in India. Yet a lot remains to be done to fulfil the constitutional commitment of providing 'equality of status' for women along with men.

Emerging areas and information needs

Availability of valid and up-to-date information on women is a prerequisite for planning need-based policies and programmes for their advancement. Although several measures have been initiated for the development of women in the country, there is a perceptible deficiency in the availability of adequate data on women. The Committee on the Status of Women in India which undertook a comprehensive examination of the status of women had also pointed out that there were some deficiencies and gaps even in the basic information required for planning for their development. A critical examination of the available data reveals the following deficiencies and gaps which, in other words, constitute the identified information needs of the national machinery:

- Much of the data is not up-to-date. There is often a time-gap of 2-3 years. In the case of census, complete data on women are available only once in 10 years and that too years after the census count is over.
- Lack of complete coverage/enumeration is another serious problem. The contribution by women in the labour market, particularly in the unorganised and household sectors, is 'under-estimated in the censuses.
- Detailed break-up by the relevant demographic and socio-economic parameters like sex, age-group, rural-urban disposition, educational and employment status, income levels by special categories of population is not available with the result that planning for specific categories like women and children becomes difficult.
- Data is not avilable at the disaggregated levels. If at all available, they are published only upto state level.
- Sometimes even the available data is not processed/published in a meaningful way facilitating its ready operational use.
- In the case of localised area-specific-studies, it is often found difficult to get an integrated all India picture of the results of such studies because of lack of uniformity in the collection of data, definitions and concepts, methodologies and tabulation programmes. Thus the value of such studies is limited only to the areas in which they are conducted.
- Up-to-date data on maternal mortality which is an important indicator to reflect the levels of development of maternal and child health services and the health status of mothers in the country, is not available. In fact, the data is collected every year through Sample Registration System (SRS) of Census but published only after a lapse of two years due to inadequacy of staff and processing system.
- Lack of data on the emerging problems like dowry/dowry-deaths, drug addiction, eve teasing etc. is another problem area. If available, the same is incomplete and unreliable as most of the incidents are off the records.
- Information regarding the implementation of social legislation relating to women is another neglected area where no in-built system for collection of data or staff is available.
- There is no regular flow of information on the problem of school drop-outs amongst girls, without which no remedial policies/programmes to control this problem could be formulated.
- No information on the problems of working women is available as not much work, except a few studies, was done in this area. As the problems of the working women are increasing day by day, data on these problems has become the need of the day to formulate policies and programmes.
- Though the women constitute a substantial portion of the labour force, yet their contribution in the unorganised sector is not included in the National Income Estimates. With the growing participation of women in labour force, these areas need to be investigated. Even in the organised sectors, the proportion of women to men at the different income levels/ranges etc. needs to be highlighted.
- Though the Government had done a lot of work to abolish the system of child labour and bonded labour, yet these problems involving a large number of girls and women continued to exist. Therefore, information on the magnitude of this problem with detailed gender-wise and age-group-wise statistics are required to be collected to bring forth necessary modifications in the existing legislation and for formulating rehabilitation programmes.
- The worst victims of various caste and community riots in India are women and children. Appropriate studies are warranted to study their rehabilitation

problems etc.

— A big gap exists, at present, in programme statistics relating to women. Although, the programmes are monitored by the implementing Ministries/Departments, yet detailed break-up of the beneficiaries by the characteristics like age, sex etc. is not made available. Normally, whatever the data is avilable, they are the by -products of annual administration reports which are far from satisfactory in regard to its content, coverage and timeliness. Practically no data is available on purely state-run developmental schemes.

The national machinery

In order to intensify the country-wide efforts launched during the International Year of the Women, a separate Bureau of Women's Welfare and Development (WWD) was set up in 1976 as part of the erstwhile Department of Social Welfare. The Bureau was entrusted with the major responsibility of implementing the National Plan of Action for Women besides serving as nodal agency to co-ordinate the activities relating to women's welfare and development.

The International Women's Decade that ended in 1985 left a lasting impact on the member countries to take up both long term and short term measures in achieving the 'Forward Looking strategies for the advancement of women upto the year 2000' The first step taken by the Government of India in this direction was to revitalise the governmental machinery at the national level by setting up a separate Department of Women and Child Development in 1985 under the newly created Ministry of Human Resource Development. The WWD Bureau under the erstwhile Ministry of Social and Women's Welfare has become part of the new Department and continued to be the national machinery/nodal agency to guide, co-ordinate and review the efforts of both governmental and non-governmental organisations working for women, besides formulating policies and programmes for the advancement of women.

Subordinate organisations

The Central Social Welfare Board (CSWB), New Delhi and the National Institute of Public Co-operation and Child Development (NIPCCD), New Delhi are the two important limbs of the national machinery. While the CSWB is an Apex Body with 31 State level branches to encourage voluntary effort in the field of women's development, NIPCCD is an advisory-cum-research-cum-national level training Institute in the field of child development with a separate Division for Women's Research and Development.

Role of the national machinery

The Department of Women and Child Development, being the national machinery/nodal agency for the development and advancement of women is made responsible:

— to formulate policies and programmes for women's development in line with the forward looking strategies for advancement of wom 2000 A.D.

— to implement the Convention of Eliminatio Forms of Discrimination against women;

— to introduce legislations/ensure eff implementation of existing legislations rela women;

— to implement as well as monitor programn women's welfare and development in the co

— to conduct research and evaluation incl analytical studies on changing status of wo

— to develop a data bank and serve as a Cl House of information on matters connecte women's development;

— to co-ordinate and collaborate the efforts of concerned Ministries/Departments of the C Government, State Governments and non-g mental agencies;

— to provide both pre-service and in-service tr for personnel at various levels; and

— to encourage voluntary efforts and pe participation.

The flow and availability of data mainly de upon the network developed in a country an effective are the channels, both horizontal and ve to allow smooth flow of information into the Data Unfortunately, India, like any other devel country in the Third World suffers from the absen proper Information Base to develop any concret grammes for women. Data on women forms one constituents in the total information network s being developed in the country. Therefore, the Department for Women has to depend upon v scattered sources. The data requirements o national machinery, at present, are met fro following three sources:

— For general background data, it has to de upon statistical publications, both regular ar hoc, brought out by various Government and agencies such as Office of the Registrar Gen India, Central Statistical Organisation ((Ministry of Labour, the Directorate Gene Employment and Training (DGE&T), Pla Commission, Ministry of Education and its organisations like University Grants Commi National Council for Educational Researc Training (NCERT), New Delhi, Minist Health and Family Welfare, Ministry of W Department of Personnel, Bureau of I Research and Development, Central S Welfare Board (CSWB), New Delhi and voluntary organisations implementing the grammes of the Department.

— For detailed in-depth data not generally ava in the routine official statistics published b above agencies, the Department sponsors s all India studies through organisations National Sample Survey Office (NSSO), Off the Registrar General of India, Progr Evaluation Organisation (PEO) of Pla Commission etc.

It also sponsors localised area specific studies of evaluatory and other types through various agencies like schools of social work, universities/research institutions through its grant-in-aid scheme. Apart from evaluation studies of various schemes sponsored by the Department, these agencies undertake studies on such topics as dowry problem, rape, drug abuse etc., topics on which no detailed data is available elsewhere.

The Department generates its own data on the implementation of its various welfare programmes by getting regular monitoring reports from the implementing agencies like State Governments and other voluntary organisations.

To meet the day-to-day as well as special data needs in the formulation of policies and programmes, the Department compiles its data from the widely scattered sources quoted above and publishes them for ready reference in their regular publications such as 'Handbook on Social Welfare Statistics' and other ad-hoc publications like 'Women in India'—A Statistical Profile (1978) and 'Child in India'—A Statistical Profile (1986).

Research and evaluation

Research and evaluation is one of the means of information flow which could be used as diagnostic/intervention/rectification data. The Department of Women and Child Development sponsors research studies of applied nature in a very limited way. They include diagnostic as well as evaluative studies. Emerging social problems like dowry, destitution, drug abuse etc. are enquired into under diagnostic studies. Evaluative studies of on-going programmes are made to assess the strength /weaknesses of these programmes for possible corrections. Results of these studies are made use of as intervention strategy at the levels of both policy formulation and programme implementation. Universities/research institutions are the major recipient organisations of grant-in-aid to carry on research on behalf of the Department. In addition, professional bodies like Indian Council of Social Science Research (ICSSR), New Delhi, Development Centre for Women's Studies (DCWS), New Delhi, Institute of Social Studies Trust, New Delhi, Indian Council of Medical Research (ICMR), New Delhi, National Institute of Nutrition (NIN), Hyderabad, Labour Bureau, Simla, Institute of Applied Man-power Research (IAMR), New Delhi are some of the major sources of information on the subject.

Monitoring and progress reporting

As stated earlier, the responsibility of monitoring the on-going developmental programmes for women, and review of the implementation of various legislations relating to women lies with the national machinery.

The recent inclusion of the subject 'Equality for Women' as one of the ingredients of the 20-Point Programme-1986, has added further responsibility to the Department for finding means to put the programme into action besides monitoring the progress of its implementation and reviewing the achievements in order to:

— raise the status of women;
— enhance awareness of the problems of women
— create mass consciousness about women's rights;
— implement a national programme of training and employment for women;
— enable women to participate with equality in socio-economic development and nation building;
— arouse public opinion against dowry and ensure effective implementation of anti-dowry legislation.

The increasing concern of the Government towards the well-being and development of women has prompted the Prime Minister's office to identify 27 developmental programmes for women to be monitored by the nodal Department of Women and Child Development and progress be reported at a regular interval of every quarter/half-yearly so that a constant watch could be kept on the socio-economic development of women in the country.

Further the introduction of Annual Action Plan in 1986 and its monitoring through submission of monthly/quarterly progress reports to Prime Minister's Office/Cabinet Secretariat by the concerned central ministries is another important measure of 'watch-dog system' adopted by the Union Government to assess the progress of implementation of policies and programmes including both budgeted and non-budgeted items. The Department of Women and Child Development has greater obligation in this regard.

Other measures in action

Although the Women's Bureau has expanded its image to meet the needs of some special groups through implementing various welfare programmes, yet it needs to be strengthened further to develop a Monitoring and Evaluation Cell, Data Bank and Clearing House, Documentation Centre, Complaints/Legal Cell, enactment and implementation of legislation, etc. To start with, a Monitoring Cell has been set up and action on setting up of other units is in progress.

Supportive machinery

Besides the Department of Women and Child Development-the Focal Point at national level, there are some special cells/units in the Central Ministries of Labour and Rural Development for implementing various development programmes and measures for women. Units in the Directorate General of Employment and Training and in the Agricultural Extension Directorate have existed even before the International Women's Year.

Linkages with other bodies

The Department maintains close linkages with the State Directorates of Social/Women's Welfare, which play the role of nodal/focal points for women's dvelopment at the state level. While a few State Governments have separate Directorates for Women's Development, the Directorates of Social Welfare in the rest of the

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Tackling the problem of child labour

C.L. Kalsi

The author here discusses the constitutional and other provisions for tackling the problem of child labour in the country. He discusses the steps taken under the Child Labour Act of 1986 and the National Policy on Labour as well as the plan of the action for the welfare of child labour. He says 'efforts are afoot to humanise the conditions of work of child labour that are more acceptable socially'. He feels, 'Improved legislation coupled with better enforcement machinery will yield positive results'.

THE GOVERNMENT IN THE LAST FOUR years has embarked on the boldest and most comprehensive programmes in the field of child labour. These have been characterised by a shift in policy which involved a thorough review of the legislations and their substitution with a simpler and more focussed national legislation, focus on welfare and development programmes and project based plan of action.

Under the present socio-economic conditions, it is neither possible nor feasible to eliminate child labour. It is also felt that not all work is harmful for children. Some activities under regulated conditions do have a positive affect on the child and the society. The concern is that child labour be abolished that endangers safety, health and welfare and exploits them as cheap labour and forecloses their future.

Poverty, the root cause

Child labour is rooted in poverty, precarious incomes and insufficient apportunities. They work for their own survival and that of their families. Economic compulsions weigh so heavily that the poor parents do not hesitate in violating the laws and putting their children to exploitation. It is still a widespread and perhaps even growing phenomenon in the world today.

The problem of child labour has been a subject of concern in India. Article 24 of the constitution provides that "No child below the age of fourteen years shall be employed to work in any factory or mine or engaged in any hazardous employment." Article 38 (e) and (f) of the Directive Principles of the State policy requires the state to direct its policy towards securing that "the health and strength of workers, men and women and the tender age of children are not abused" and that "Children are given opportunities and facilities to develop in a healthy manner" and protected against exploitation."

Yet, the child labour remains a persistent and ubiquitous problem. According to the national census there were, in 1986, a total of 16.66 million working children in the country. Moreover, many are found working in small unenumerated factories and various type of industrial enterprises where both work and working conditions are often hazardous and dangerous.

What is being done

Following the National Poilicy Resolution for Children in 1974, a National Children's Board with Prime Minister as its President was established. A high-level committee on child labour was set up in 1979. International Labour Organisation, as part of the International Year of the Child in 1979, adopted a resolution, 'that abolition of child labour will take time, the need during the transitional period lay in measures to regulate and humanise it.' The Central Advisory Committee continued to find solution of this problem over the years.

But the present policy about child labour consists of three main ingredients: legal action, welfare and development programmes for them and their families and project-based plan of action. The step taken under the legal action plan, was the adoption of Child Labour Act, 1986. The Act prohibits employment of children under the age of 14 in occupations and processes commonly recognised to be hazardous. It also regulates the conditions of work in activities permitted by law. There is a provision for Child Labour Technical Advisory Committee to review other employments which do not warrant employment of child labour. This committee had further recommended banning of child labour in employments where shops possess temporary licences to sell crackers and fire works, manufacturing processes using toxic metals such as lead, mercury, chromium, benzine and slate pencils. The necessary notifications are under way. Thus the Act has streamlined earlier legislation by providing a launching pad for Government intervention in priority areas of concern and in specific industries or regions.

Concrete action

Under welfare, the ongoing development programmes for the benefit of child labour and their families will be utilised. Various national development programmes of National Rural Employment programme

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News from Parliament

District Planning

istrict Level Planning exercise, already going in eral States, is proposed to be strengthened and its erage enlarged so that by the time Eighth Plan is mulated, it would be possible to base it also, *interalia*, district level plans.

ince 1982, the expenditure incurred to strengthen nning machinery at district level is being reimbursed he States by the Center on 50:50 basis. The State ining Institutes are also being assisted on 50:50 is for strengthening their training faculties to vide training to the personnel engaged in District nning.

n the area of district level planning, progress has n made by different States at different levels. States Uttar Pradesh, Gujarat, Maharashtra, West Bengal, nataka, Andhra Pradesh, Orissa etc. have made siderable progress and district plans are being ularly prepared. In other States like Rajasthan, dhya Pradesh, Haryana, Punjab, etc., efforts are ng made to prepare district plans. Further efforts to rove the level of planning efforts at the district level ll States are being pursued. □

Non-plan expenditure

'he Planning Commission has been constantly phasising the need to contain the growth in non-plan enditure. Various suggestions in this regard have n highlighted in the Seventh Five Year Plan cument.

'he aspect relating to pruning of non-plan expendi- e is constantly under review of the Government with iew to containing its growth. Some of the steps templated in this regard include adoption of the tem of Zero-based budgeting; review of various sidies; prioritization of expenditure; examination of going programmes and pruning of programmes of ibtful economic unnecessary work, reduce overlap l simplify procedures; moderation in the growth of ges and salaries; priority in favour of completing on- ng programmes as compared with the launching of r schemes etc. □

Debt servicing

'he Planning Commission has set up Working Group Financial Resources and Balance of Payments to ess the resources for financing of the 8th Five Year n. The actual components of external financing uired and the debt service ratio will be known when estimates of these two groups become available. Working Groups are still deliberating on the ious issues involved.

'he debt service relative to current receipts during 7th Plan (1985-90) was projected at 17.6 percent.

'he necessary steps are expected to be considered by the Working Group Balance of Payments in their report. □

People below poverty line

At the time of commencement of the Seventh Five Year Plan, the estimates of persons living below poverty line were available for the year 1983-84 which were prepared on the basis of the results of the 38th round of National Sample Survey data on Household Consumer Expenditure. According to these estimates 530.6 lakh persons were below poverty line in Uttar Pradesh and 365.5 lakh persons were below poverty line in Bihar.

The main criterion for determining the poverty line is calories consumption. The Task Force on "Minimum Needs and Effective Consumption Demand constituted by Planning Commission in 1979 defined the poverty line as per capita monthly expenditure of Rs. 49.09 in rural areas and Rs. 56.64 in urban areas at 1973-74 prices corresponding to the per capita daily calorie requirement of 2400 in rural areas and 2100 in urban areas. □

Utilisation of potentialities

A Working Group on Technology Input and Promotion of High-tech industries has been set up by the Steering Committee on Industry constituted by the Planning Commission for the formulation of the Eighth Five Year Plan. This Group would review, among other things the present level of technology in use in major industries in the country such as engineering and electronics, mining, metallurgy, fertilizers; chemicals (including petrochemicals) and consumer industries; assess the extent and quality of technological services available to facilitate absorption of technology, technological improvements and innovations; suggest how these would be enhanced to assist rapid industrial growth; review the relationship between external Research & Development institutions and industries and suggest how these should be improved to achieve the objective of accelerating technological innovation.

The report of the group is awaited. □

Farm Sector & G.D.P

The share of agriculture sector in the Gross Domestic Product at factor cost at 1970-71 prices in 1950-51 and 1985-86 was 57% and 34.5% respectively. The share has come down because the rate of growth of industry, infrastructure and services sector has been faster than the rate of growth of agriculture. Planning for industralisation, modernisation and overall development has brought about this result. In the natural process of economic growth it is seen that the higher the level of development, higher is the contribution of secondary and tertiary sectors in the economy. The growth rate of value added in agriculture increased from 2.06 per cent per annum during 1950-51 and 1974-75 to 2.30 per cent per annum during 1974-75 and 1983-84. The output of

odgrains increased from 50.8 million tonnes in 1950- to 150.5 million tonnes in 1985-86.

According to the latest information furnished by the Reserve Bank of India, direct loans issued to the farming Sector i.e. agriculture and allied activities, by cooperatives, Scheduled Commercial Banks, Regional Rural Banks and State Governments during the year 1986-87 (July-June) amounted to Rs.7921 crore. As regards advances to other sectors such information is available only in respect of Commercial Banks which pertains to outstanding advances of Scheduled Commercial Banks. At the end of March, 1987 outstanding gross banking credit amounted to Rs. 62554 crore of which Rs.5104 crore was towards public food procurement credit, Rs.10590 crore for agriculture, both direct and indirect, and balance Rs.46860 crore to other sectors.

The aggregate amount of Rs.7.26 crore of bad debts was written off by Public Sector and Private Sector Banks during the year 1985 and Rs. 98.89 crore during 1986. Of these bad debts relating to agricultural sector written off by public sector banks amounted to Rs. 1.33 crore in 1985 and Rs.6.00 crore in 1986. ◻

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NREP), Rural Labour Employment Generation Programme (RLEGP), non-formal and formal education will also be utilised to create socio-economic conditions in which the compulsions to send the children to work diminish and the children are encouraged to attend schools rather than take wage employment.

A project-based plan of action under the National Policy on Labour is being implemented in 10 areas where the incidence of child labour is high or where employment is manifestly hazardous or legally prohibited. These projects are being implemented through the State Government and voluntary organisations. This idustries covered under the programme are: match industry of Sivakasi in Tamil Nadu, diamond polishing of Surat in Gujarat, precious stone polishing of Jaipur in Rajasthan, glass industry of Ferozabad in Uttar Pradesh, the brassware industry of Moradabad in Uttar Pradesh, the lock-making of Jammu and Kashmir, and the Slate industry of Mandsaur in Madhya Pradesh and Markapur in Andhra Pradesh. Many hundred thousands of children and many more households are expected to get benefit from these projects.

Some other programmes

The Government has programmes to spend Rs.110 million a year over the coming five years on these projects. The allocation may be larger with the intensification of employment and income-generating schemes in these projects. The Government is also convinced that it needs to back up this relatively enormous political and financial commitment with a commensurate effort in devoloping its capability in programming, implementation and in the provision of support services. Otherwise, there is a serious risk that the current annual allocation for the child labour and other related projects may not be effectively utilised and the efforts could be adversely affected. It is being proposed to complement current resources and efforts through Child Labour Action and Support Projects (CLASP).

CLASP

The CLASP will enhance the policy, planning and implementation capacity and provide support to on-going and future projects, mobilise greater support and sustain community-wide movement on behalf of working children and facilitate a more efficient use of Govvernment resources.

At present four projects are functioning on the basis of new plan of action. A project for the welfare of children working in the match industry of Sivakasi in Tamil Nadu which was started in 1986, had been modified as part of the enforcement of National Child Labour Policy in mid-1987. For Children working in slate pencil industry in Mandsaur, Madhya Pradesh, the project was launched in May this year and for Markapur in Andhra Pradesh in October last year. The project for the welfare of children in gem-polishing in Jaipur, Rajasthan commenced in May last year. The ILO assisted in the formulation and designing of projects which would translate into action the aspirations and obligations enunciated in the Act and the policy.

What is needed

The elimination of child labour as an objective and pending its attainment is to improve the conditions of work for the working children that are basic to the children's protection, welfare and defence of their rights. Efforts are afoot to humanise conditions of child labour that are more socially acceptable. Improved legislation coupled with better enforcement machinery will yield positive results. ◻

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States take care of the nodal responsibility. The State focal points have the responsibility of implementing various welfare and developmental schemes. Being the intermediary administrative links between the Centre and the District/field level organisations, these focal points have more responsibility in ensuring smooth flow of infromation both vertically and horizontally.

The set-up of national machinery on women extends upto district level but is limited to only a few States. The district level set-up, that is the office of the District Social Welfare Officer, functions as part of the District Collectorate. Beyond the district level, there is no organisational structure of the national machinery on women. The staff working for the women's welfare at the block level is treated as part of the total set-up of the Developmental Blocks of Rural Development who coordinates all the developmental activities at field level. ◻

(To be continued)